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RAILWAY RESEARCH SERVICE

THE MAIN LINE RAILWAYS

OF

GREAT BRITAIN,

1923-1937

THE MAIN LINE RAILWAYS OF GREAT BRITAIN, 1923—1937.

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THE MAIN LINE RAILWAYS OF GREAT BRITAIN, 1923—1937.

I. INTRODUCTORY.

Inclusive of 1923, the results of fifteen years of working of the four large main line railways of Great Britain are now available, and the period is of sufficient length to show up in true perspective the various trends exhibited by the figures contained in this study.

The present review follows the same general lines of the three earlier studies, on which the present one is based, published respectively in 1929 by the London and Cambridge Economic Service, in 1931 and again in 1934 by the Railway Research Service.

To include annual figures for the whole fifteen years would have made this review unwieldy and overweighted with statistical matter, whilst special features make several of the earlier years, such as 1926 and 1927, unreliable for comparative purposes. The year 1923 has been retained, however, for the reason that it was the first year of practically complete grouping, and 1929 has since come to be regarded, though not at the time seen in that light, as the year probably most approaching the normal, or perhaps, more accurately, the hoped for normal.

II. THE BRITISH INDUSTRIAL POSITION, 1923—1937.

In retrospect this period of fifteen years falls into three distinct periods: firstly, rising prosperity in general 1924—1930, though marred by the industrial troubles of 1926; secondly, trade depression 1931—1933; thirdly, growing recovery 1934—1937.

Although the incidence of the worst months of the depression occurred in different years in the various countries, no nation, nor its railway system, proved immune, and railways throughout the world have suffered more than most of the other industries because they have had to face the steady growth of road competition from 1923 onwards. The extent to which they have met this challenge successfully has been due, in part, to their own ability to meet such competition by better facilities or lower charges or both, and, in part, to the extent to which the respective Governments have passed legislation controlling the activities of the new competitor whose overhead costs, compared with a railway system, are small, for the reason, in part, that it makes use of the public roads as its track and place of business, paying for such usage by means of taxes, levied both on the vehicles and on the fuel they use. In the majority of countries, it is claimed that such use of the public roads is inadequately paid for, and consequently there is an element of subsidy by which road transport obtains an advantage over the railway.

The British railways are amongst the few railway systems of the world which still remain company owned and operated, and they can truly claim that they have never been subsidised financially by the British Government. In this respect they occupy an almost unique position which is in strong contrast to the aid, direct or indirect, given to railways in other countries by their respective Governments.

Some measure of the extent to which the British railways have had to meet road competition may be gathered from the following figures showing the number of motor vehicles in Great Britain, a census of which has been taken annually since 1926 during the quarter ending in September, normally a peak period for the currency of licences.

It should be noted that the figures for passenger cars include taxicabs, buses and coaches, as well as private cars, but the railways themselves have large fleets of motor lorries, mechanical horses and trailers, and also have invested large capital sums in bus operating companies, and, to a lesser

extent, in road haulage concerns; the railways' vehicles are chiefly engaged on collection and delivery work, as will be seen later in this survey. To this small extent the data shown hereunder should be qualified:

Road Motor Vehicles—Great Britain.

Year	Motor Cycles	Passenger Carrying Vehicles	Goods Vehicles	Total (including Miscellaneous)
1923	430,138	469,490	173,363	1,131,565
1929	731,298	1,078,883	329,794	2,195,712
1930	724,319	1,157,345	348,441	2,287,326
1931	626,649	1,170,921	360,614	2,213,722
1932	599,904	1,212,631	370,100	2,239,567
1933	562,656	1,288,322	387,487	2,297,326
1934	548,461	1,393,554	412,766	2,416,908
1935	516,567	1,562,925	433,989	2,581,027
1936	505,779	1,728,859	458,394	2,768,606
1937	487,578	1,883,871	478,047	2,938,485

The measure of road competition is not the direct loss of receipts alone, incurred through the diversion of traffic, but of at least equal importance are, firstly, the necessity for quoting competitive rates in order to retain traffic, thereby reducing the average receipt per passenger-mile and per ton-mile, and, secondly, the fact that the road haulier is, in practice, free to choose the class of traffic he handles, and, basing his charge on the cost per vehicle-mile, naturally concentrates on the higher value traffics and those consignments which load well. This in its turn also conduces to a lower railway receipt per ton-mile.

Legislation affecting the railways' methods of charging and the actual charges themselves provide one continuous story over more than one hundred years, and the principles adopted in these legislative enactments hinged on the theory that a railway possessed an almost complete monopoly for land carriage over any distance greater than a few miles. Canal competition was not of major importance and coastal competition was only completely effective as between ports and their immediate hinterlands.

The first step towards giving the railways an opportunity to meet road competition was in 1928 when, after a long drawn-out parliamentary enquiry, the railways were given permission, with certain exceptions, to provide road passenger and freight services either with their own vehicles, or by agreement with other operators; they were also empowered to obtain a financial interest in road operating companies. This legislation was known as the Railway Road Transport Acts. In the case of passenger services, they adopted the policy of acquiring large scale investments in existing road passenger operating concerns, a list of which appears later in this survey. Co-ordination was achieved in two ways. The railway or railways concerned nominated one or two representatives on the board of directors of each of the associated bus companies. There were also set up, under the terms of the working agreements between the railways and the bus companies, Standing Joint Committees. Each Committee consists normally of two railway and two bus representatives. Their duties, broadly speaking, comprise the consideration of means to avoid further competition between rail and road services in the area concerned, and the making of such adjustments in services and fares as are in the interests of the public and the parties to the agreement.

As regards road haulage, they were unable to adopt a similar policy owing to the multitudinous ownership existing in the road haulage industry, and, therefore, enlarged their own cartage fleets, but somewhat later acquired the two large road operating concerns of Carter Paterson & Co., Ltd., and Hay's Wharf Cartage Co., Ltd., (Pickfords), whilst they also own important financial interests in other large road haulage concerns.

The Road Traffic Act of 1930, which was the first of a series of legislative enactments designed to bring about some measure of co-ordination of rail and road facilities, because it contained provisions for the licensing of all public passenger services by road, set up area licensing authorities, and has, in the course of subsequent years, achieved a welcome measure of stabilisation in the public road passenger carrying industry, thereby enabling a considerable degree of rail and road co-ordination to be achieved.

Annual returns of passengers carried by road, which have steadily increased, demonstrate that the charge that legislation of this nature is restrictive and has strangled the industry, is groundless.

The Road and Rail Traffic Act of 1933 was aimed at achieving similar stabilisation in the much more complex case of road haulage.

The problem is rendered exceedingly difficult by the existence of the so-called ancillary user, the private carrier, and, if legislation of the public carrier becomes exacting, there is a tendency for a business to acquire and operate its own vehicles.

The 1933 Act made no provision for the regulation of rates charged by road hauliers and there was little effective statutory control over the wages and conditions of work of the travelling staff on road vehicles. Recent legislation will deal with this latter question.

A feature of the Road and Rail Traffic Act, 1933, was the permission it gave to the railways to make "Agreed Charges" with individual traders, and the scheme has proved very popular with traders. Several hundred such "Agreed Charges" have been approved by the Railway Rates Tribunal, and the method has been since adopted in France. A Canadian Government Bill provides for its introduction into that Dominion.

The year 1933 also witnessed the passage of the London Passenger Transport Act setting up the London Passenger Transport Board. To this Board was given the monopoly of public passenger transport, other than that of the main line railways, in the London area, and provision was made for the pooling of all passenger receipts in this area between the Board and the main line railways as from the 1st July, 1933, the date of the Board's formation.

It will be realised that this important landmark in British transport legislation, with its provision for a publicly appointed Board, and the granting to it of monopoly powers marks a further step in the policy designed to achieve a co-ordinated transport system in Great Britain.

The years 1932—1934 were also important because of the pooling agreements reached between the London Midland and Scottish, London and North Eastern and Great Western Railways, covering all types of traffic between competitive points. The three pools, dating from 1st July, 1932, and all based on the 1928, 1929 and 1930 traffics, were as follows: London Midland and Scottish and London and North Eastern; London Midland and Scottish, London and North Eastern and Great Western; and London Midland and Scottish and Great Western. They covered all competitive passengers, passenger train traffic and the various classes of freight traffic. A London Midland and Scottish, London and North Eastern, Great Western and Southern Railways pool to cover all parcels traffic came into operation at the beginning of 1934.

Mention should be made of the Railway Freight Rebate Scheme applicable to the railways as from December, 1928. Under this scheme, 75 per cent. of the local rates were paid by the railways into a pool for the purpose of granting rebates on certain specified railway traffics. The Railways (Valuation for Rating) Act, 1930, provided for the re-assessment of local rates payable by the railways throughout England and Wales, adopting the principle long operative in Scotland, and, when the Railway Assessment Authority completed its valuation, the railways claimed that the assessments were too high. As a result of a long drawn-out legal battle, based primarily upon the Southern Railway's valuation which, being the first valuation roll to be completed, came to be regarded in the nature of a test case, the considerable sum of about £12,000,000 became repayable to the railways in April, 1935—March, 1936, in respect of past overpayments, covering the first quinquennial period, 1931—1936. In view of the fact that the repayment to the railways could not be effected out of the Railway Freight Rebates Fund, managed by the Railway Clearing House, a loan of £9,300,000, repayable in 26 years, was floated, and the balance is recoverable from the local authorities.

These large repayments enabled the railways to strengthen either their renewal funds or their reserves which had had to be drawn upon during the depression years.

It was also necessary to adjust some of the financial figures retrospectively, which will explain why certain statistical data in this review do not quite tally with certain figures covering 1931—1933 in the previous edition. Agreement has been reached between the railways and the Railway Rating Assessment Authority covering the assessments for the second quinquennial period, April, 1936—March, 1941, so that this disturbing feature will not recur.

As regards standard freight rates, there was no change from the date they originally came into force, namely the 1st January, 1928, known as the Appointed Day under the Railways Act, 1921, until the 1st October, 1937, when an increase of approximately 5 per cent. took place, as authorised by the Railway Rates Tribunal. This increase was suggested by the railways, as it was considered that, thanks to the revival in trade, such an increase would result in a substantial measure of increased net receipts, and would not weigh too heavily upon industry. Though the scales of standard charges did not change over this period of practically ten years, the average receipt per ton-mile fell considerably, partly due to the diversion of the more highly valued traffic to the roads, and partly due to the necessity for granting thousands of exceptional rates in order to retain traffic to the railways.

The proportion of traffic carried at the standard rates has consequently fallen very considerably as the figures shown hereunder bear witness. They apply to all descriptions of traffic except that in the coal class, and are compiled from data collected in a test week in March in each of the years shown :

Proportion of Traffic at Standard Charges.

		1930	1935
		%	%
Tonnage	24.24	17.29
Receipts	40.37	32.33

Standard passenger fare scales, also dating from 1928, remained unaltered until October, 1937, when an increase of approximately 5 per cent. became applicable; but the granting of numerous cheap fares has depressed the average receipt per passenger-mile, a specific example being the "Summer Tickets" made available in May, 1933, and later renamed "Monthly Return Tickets," carrying a third-class fare of 1d. per mile, with availability for a period of one month throughout the year. Changes in fares and freight rates are dealt with more fully later in this review.

The fluctuations of trade activity possess so many cross currents due to their variations in the individual industries and to differences even with the same industry in the several geographical areas that it would be impossible to give any clear picture, in a few sentences, of the trends evidenced in a period of fifteen years. Dependence must be made on the figures shown hereunder dealing with the index of production, unemployment, and imports and exports for the country as a whole. One may, however, stress the fact that certain industries which were the most depressed, such as iron and steel, have, since the recovery in trade, provided figures of record output.

Year	Index of Production		Foreign Trade. Board of Trade Index of Volume.	
	London and Cambridge Economic Service 1924 = 100	Unemployment % of Total Insured Persons.	Imports 1924 = 100	Exports
1923	.. 91.1	11.7	—	—
1929	.. 115.8	10.4	114.0	108.3
1930	.. 106.5	16.1	113.7	86.0
1931	.. 97.3	21.3	116.8	65.8
1932	.. 98.8	22.1	102.4	66.0
1933	.. 107.7	19.9	104.2	67.4
1934	.. 120.4	16.7	110.2	72.6
1935	.. 127.4	15.5	111.2	78.4
1936	.. 136.9	13.1	119.7	80.0
1937	.. 143.1	10.9	126.8	87.0

In view of the extent to which the railways own ports where coal is shipped for bunkers and export, it is probably fair to claim that their interest in the export trade is closer than in the import trade; it is of interest to note that, as compared with 1924, the 1937 volume of imports was up by over 25 per cent., but the volume of exports was down by 13 per cent.

CAPITAL RECEIPTS AND EXPENDITURE.

In Table I will be found the figures of capital receipts applicable to the years forming the subject of this review, whilst Table 2 gives the relevant data concerning capital expenditure, in short, the cost of building up the British railway system with its various ancillary businesses, such as road transport, docks, steamers, hotels, etc.

The effect of trade depression with its adverse effect on railway net receipts is well exemplified by the virtually stable figure for capital receipts from 1933 to 1937. During the period, 1923—1933, about £55,000,000 of new capital had been raised.

The large scale capital improvements which have been, and are still being, made since 1935 have been mainly financed through the London Electric Transport Finance Corporation, Ltd., and the Railway Finance Corporation, Ltd., organisations specially set up for the purpose of raising new capital to carry out the two large programmes of improvement, electrification, rolling stock, widenings and the like, approved under the London Passenger (Agreement) Act of 1935 and the Railways (Agreement) Act of the same year. By these means, the railways were enabled to benefit through the raising of capital at the very low interest rate of less than 3 per cent., there being a guarantee of capital and interest by the Government, while the Government itself benefitted through the starting of important schemes of work at a time when they would not otherwise have been undertaken, thus relieving, to some extent, unemployment in many industries and various areas. The railways themselves could only have raised such large sums at interest rates which would not have allowed works to have proved remunerative.

The travelling public and the traders stand to benefit by the better facilities which the two large programmes make possible. Under the Development (Loan Guarantees and Grants) Act of 1929, the railways undertook a considerable number of major capital improvement schemes; in this case, Government grants being available, up to a maximum period of fifteen years, representing interest on the capital outlay incurred on the approved works. This represents the nearest approach to financial assistance which has ever occurred since the formation of the four main line companies.

A glance at Tables 1 and 2 will reveal there has been a fairly steady increase of capital expenditure each year, the accretion since 1923 being approximately £73,000,000, and that, whereas in 1923, total capital expenditure exceeded total capital receipts by about £57,000,000, the excess had risen to nearly £74,000,000 in 1937. This difference is explained by capital outlay temporarily met out of reserves, savings bank deposits, superannuation funds and so forth; also during the last two years by funds provided through the two Finance Corporations previously mentioned.

The manifold uses to which new capital expenditure is put under present conditions could hardly be summarised briefly, but amongst the many heads under which the various schemes fall may be specifically mentioned the following:

- (a) New railways, such as Motspur Park to Leatherhead, Southern Railway (although such examples are now comparatively rare);
- (b) Electrification, as, for instance, London to Portsmouth, Southern Railway, by two routes, the Wirral Section of the London Midland and Scottish Railway, extensions on Tyneside, London and North Eastern Railway, etc.;
- (c) Widenings of main lines, for example, between Didcot and Swindon, Great Western Railway, Romford and Shenfield, London and North Eastern Railway, etc.;
- (d) Additional passenger and freight station accommodation;
- (e) Additional and improved rolling stock;
- (f) Engine shed improvement and carriage sheds;
- (g) Track circuits, telephones and telegraphs;
- (h) Improved signalling apparatus;
- (i) Improved permanent way, workshops and machinery, such as at sleeper creosoting plants, etc.;
- (j) Additions, improvements or more modern machinery at locomotive, carriage and wagon workshops.

These and many other items create the continuous demand for new capital on the railway itself, and it should be noted that the increase each year is a net increase, that is to say, it consists of the amount by which new capital expenditure exceeds the amount of capital reduction due to assets displaced. In general, schemes involving additional capital expenditure are expected to provide a return more than sufficient to cover the interest on the capital concerned, and the rate of return on many schemes, such as re-signalling, has proved very satisfactory. On the other hand, certain station reconstruction schemes have been undertaken primarily as a necessary improvement in facilities.

Tables 3 and 4 show the division between capital expenditure on the railways as such, and on the ancillary businesses, and Table 5 shows the latter data for each of the various businesses separately:

TABLE 1. **Total Capital Receipts.**

	1923	1929	1930	1931	1932
	£	£	£	£	£
L.M.S. ..	414,902,907	428,276,826	429,776,826	429,776,826	429,776,826
L.N.E. ..	317,586,663	328,983,391	330,975,478	331,683,391	331,683,391
G.W.R. ..	159,927,469	167,258,038	167,258,455	167,260,499	167,241,002
S.R. ..	144,105,462	153,072,926	156,027,925	156,027,925	159,318,963
Total ..	1,036,522,501	1,077,591,181	1,084,038,684	1,084,748,641	1,088,020,182

	1933	1934	1935	1936	1937
	£	£	£	£	£
L.M.S. ..	429,776,826	429,776,826	429,776,826	429,776,826	429,776,826
L.N.E. ..	331,683,391	331,669,351	332,248,153	332,276,143	332,273,040
G.W.R. ..	169,714,282	169,714,282	169,714,348	169,714,693	169,714,899
S.R. ..	160,777,926	160,777,926	160,777,926	160,777,926	160,777,926
Total ..	1,091,952,425	1,091,938,385	1,092,517,253	1,092,545,588	1,092,542,691

TABLE 2. **Total Capital Expenditure.**

	1923	1929	1930	1931	1932
	£	£	£	£	£
L.M.S. ..	438,097,672	448,508,842	452,281,721	453,441,064	453,037,579
L.N.E. ..	339,209,156	344,249,450	347,085,421	348,295,511	349,349,642
G.W.R. ..	167,805,054	174,113,945	175,630,028	179,423,866	181,084,289
S.R. ..	148,397,505	158,088,522	159,389,717	160,771,595	163,139,152
Total ..	1,093,509,387	1,124,960,759	1,134,386,887	1,141,932,036	1,146,610,662

	1933	1934	1935	1936	1937
	£	£	£	£	£
L.M.S. ..	452,974,229	452,554,778	452,843,092	454,444,205	456,684,343
L.N.E. ..	350,076,791	351,333,741	351,554,147	351,736,607	352,589,512
G.W.R. ..	182,504,569	183,685,192	184,072,637	184,695,041	185,390,751
S.R. ..	164,336,509	166,064,274	167,425,314	169,144,332	171,495,577
Total ..	1,149,892,098	1,153,637,985	1,155,895,190	1,160,020,185	1,166,160,183

TABLE 3.

Capital Expenditure on Railways.

	1923	1929	1930	1931	1932
	£	£	£	£	£
L.M.S. ..	372,500,000	382,901,709	384,152,206	385,116,963	384,421,372
L.N.E. ..	281,800,000	285,459,179	286,379,847	287,328,077	288,309,508
G.W.R. ..	140,400,000	144,122,741	145,482,083	147,317,960	148,951,421
S.R. ..	131,800,000	138,572,664	139,101,289	139,416,478	139,961,072
Total ..	926,500,000	951,056,293	955,115,425	959,179,478	961,643,373

	1933	1934	1935	1936	1937
	£	£	£	£	£
L.M.S. ..	384,569,484	384,081,266	384,811,568	386,886,630	388,977,581
L.N.E. ..	288,514,840	288,891,002	289,200,863	289,553,375	291,682,410
G.W.R. ..	149,713,669	149,985,663	150,340,989	151,202,170	151,763,926
S.R. ..	140,148,570	140,814,942	141,747,967	143,544,885	145,860,683
Total ..	962,946,563	963,772,873	966,101,387	971,187,060	978,284,600

TABLE 4.

Capital Expenditure on Ancillary Businesses.

	1923	1929	1930	1931	1932
	£	£	£	£	£
L.M.S. ..	26,900,000	27,327,777	27,468,125	27,295,854	27,258,516
L.N.E. ..	31,200,000	32,706,888	33,242,633	33,329,024	33,495,149
G.W.R. ..	21,900,000	23,608,570	23,652,526	23,844,779	23,869,888
S.R. ..	9,500,000	12,655,680	13,524,448	14,358,701	16,218,274
Total ..	89,500,000	96,298,915	97,887,732	98,828,358	100,841,827

	1933	1934	1935	1936	1937
	£	£	£	£	£
L.M.S. ..	27,278,272	27,174,731	27,306,089	27,037,088	27,449,616
L.N.E. ..	34,055,518	34,726,527	34,886,356	34,903,987	33,955,458
G.W.R. ..	23,861,861	23,938,007	23,989,014	24,026,662	24,084,929
S.R. ..	17,302,316	17,866,090	18,349,828	18,364,965	18,397,177
Total ..	102,497,967	103,705,355	104,531,287	104,332,702	103,887,180

TABLE 5.

Capital Expenditure on Individual Ancillary Businesses at 31st December, 1937.

	L.M.S.	L.N.E.	G.W.R.	S.R.	Total
	£	£	£	£	£
Road Services :					
Vehicles, garages, etc. ..	3,313,969	2,022,073	1,537,042	382,774	7,255,858
Steamboats and marine workshops	2,828,372	2,896,864	414,965	2,806,821	8,947,022
Canals	5,999,590	1,302,761	738,263	40,000	8,080,614
Docks, Harbours and Wharves ..	10,217,076	24,968,309	20,962,973	13,820,398	69,968,756
Hotels	5,090,609	2,765,451	431,686	1,347,184	9,634,930
Total	27,449,616	33,955,458	24,084,929	18,397,177	103,887,180

As regards Table 4, the fact requires to be stressed that the increase in capital expenditure is a net figure, because the sale of certain assets, such as Tyne Dock to the Tyne Improvement Commissioners in 1937, serves to cloak the large expenditure made on Southampton Docks, the South Wales ports, Heysham, Parkeston, etc. Again, two-thirds of the railway owned fleets have been replaced since 1923, the new capital being largely offset by the sale of many vessels.

Heavy capital sums have been spent in modernising the numerous railway hotels, but against this the actual number of hotels has fallen by ten.

Considerable capital expenditure has also been incurred on building up the road motor fleets, but against this the railway owned buses and coaches have been handed over since 1929 to the various bus operating concerns listed hereunder, in which the railways have invested about £10,000,000. In addition, over £3,000,000 has been spent on the acquisition of Messrs. Carter Paterson and Pickfords, as well as in obtaining a financial interest in other businesses of a similar character.

List of Associated Omnibus Companies—1937.

Omnibus Companies.	Railway Interests held by :
Aldershot & District Traction Co., Ltd.	S.R.
Alexander, W. & Sons, Ltd.	L.M.S.R. L.N.E.R.
Birmingham & Midland Motor Omnibus Co., Ltd.	L.M.S.R. G.W.R.
City of Oxford Motor Services, Ltd.	G.W.R.
Crosville Motor Services, Ltd.	L.M.S.R. G.W.R.
Cumberland Motor Services, Ltd.	L.M.S.R.
Devon General Omnibus & Touring Co., Ltd.	G.W.R. S.R.
Eastern Counties Omnibus Co., Ltd.	L.M.S.R. L.N.E.R.
Eastern National Omnibus Co., Ltd.	L.M.S.R. L.N.E.R.
East Kent Road Car Co., Ltd.	S.R.
East Midland Motor Services, Ltd.	L.M.S.R. L.N.E.R.
East Yorkshire Motor Services, Ltd.	L.N.E.R.
Hants & Dorset Motor Services, Ltd.	S.R.
Hebble Motor Services, Ltd.	L.M.S.R. L.N.E.R.
Highland Transport Co., Ltd.	L.M.S.R.
Lincolnshire Road Car Co., Ltd.	L.M.S.R. L.N.E.R.
Maidstone & District Motor Services, Ltd.	S.R.
Northern General Transport Co., Ltd.	L.N.E.R.
North Western Road Car Co., Ltd.	L.M.S.R. L.N.E.R.
Ribble Motor Services, Ltd.	L.M.S.R.
Scottish Motor Traction Co., Ltd.	L.M.S.R. L.N.E.R.
Southdown Motor Services, Ltd.	S.R.
Southern National Omnibus Co., Ltd.	S.R.
Southern Vectis Omnibus Co., Ltd.	S.R.
Thames Valley Traction Co., Ltd.	G.W.R. S.R.
Trent Motor Traction Co., Ltd.	L.M.S.R. L.N.E.R.
United Automobile Services, Ltd.	L.N.E.R.
Western National Omnibus Co., Ltd.	G.W.R.
Western Welsh Omnibus Co., Ltd.	G.W.R.
West Yorkshire Road Car Co., Ltd.	L.M.S.R. L.N.E.R.
Wilts & Dorset Motor Services, Ltd.	S.R.
Yorkshire Traction Co., Ltd.	L.M.S.R. L.N.E.R.
Yorkshire Woollen District Transport Co., Ltd.	L.M.S.R. L.N.E.R.

IV. MILEAGE OF LINES AND ROLLING STOCK.

There is little comment called for by Table 6 which gives details of the route-mileage of the four railways. The peak figure was reached in 1931, and the minimum figure in the fifteen years in 1937, but on balance there was an excess of mileage closed and taken up over new mileage opened amounting to less than 120 miles, accounted for by a few branch lines and various smaller changes.

It is, perhaps, remarkable that the amalgamation of nearly all the railways into four large groups in 1923 did not result in a bigger abandonment figure, but it is to be noted that neither this nor the succeeding Table 7 gives any indication of the mileage closed to passenger traffic since 1923, which is estimated to total rather over 1,000 route-miles.

Table 7 takes due account of the various sections of line upon which the number of tracks has been increased such as between Taunton and Exeter, or York and Northallerton, to mention but two important cases. In the case of track-mileage, either inclusive or exclusive of sidings, the peak figure was attained in 1933. In the former case, the increase for 1937 over 1923 is nearly 1,000 miles.

TABLE 6. Mileage of Lines Open for Traffic—Length of Road.

		1923	1929	1930	1931	1932
L.M.S.	..	6,911	6,927	6,925	6,932	6,929
L.N.E.	..	6,451	6,392	6,383	6,387	6,384
G.W.R.	..	3,774	3,794	3,804	3,804	3,801
S.R.	..	2,153	2,190	2,194	2,193	2,194
Total	..	19,289	19,303	19,306	19,316	19,308
		1933	1934	1935	1936	1937
L.M.S.	..	6,924	6,923	6,916	6,895	6,870
L.N.E.	..	6,383	6,381	6,377	6,372	6,365
G.W.R.	..	3,795	3,793	3,790	3,782	3,781
S.R.	..	2,194	2,185	2,167	2,169	2,162
Total	..	19,296	19,282	19,250	19,218	19,178

TABLE 7. Mileage of Running Lines Reduced to Single Track.
Excluding Sidings.

		1923	1929	1930	1931	1932
L.M.S.	..	13,289	13,364	13,369	13,383	13,397
L.N.E.	..	11,430	11,479	11,469	11,494	11,495
G.W.R.	..	6,323	6,398	6,411	6,427	6,444
S.R.	..	4,131	4,168	4,178	4,161	4,166
Total	..	35,173	35,409	35,427	35,465	35,502
		1933	1934	1935	1936	1937
L.M.S.	..	13,399	13,388	13,366	13,341	13,307
L.N.E.	..	11,520	11,485	11,481	11,475	11,471
G.W.R.	..	6,473	6,473	6,473	6,475	6,476
S.R.	..	4,166	4,153	4,138	4,145	4,139
Total	..	35,558	35,499	35,458	35,436	35,393

Including Sidings.

	1923	1929	1930	1931	1932
L.M.S. ..	19,143	19,320	19,371	19,390	19,419
L.N.E. ..	16,528	16,730	16,735	16,774	16,780
G.W.R. ..	8,605	8,926	8,959	8,993	9,030
S.R. ..	5,336	5,440	5,452	5,430	5,432
Total ..	49,612	50,416	50,517	50,587	50,661

	1933	1934	1935	1936	1937
L.M.S. ..	19,413	19,406	19,382	19,350	19,296
L.N.E. ..	16,842	16,824	16,843	16,834	16,806
G.W.R. ..	9,075	9,077	9,087	9,094	9,073
S.R. ..	5,432	5,415	5,398	5,423	5,418
Total ..	50,762	50,722	50,710	50,701	50,593

Thanks to progress in the science of signalling, the potential capacity of many main lines has been increased to a great extent thus avoiding the necessity for heavy capital expenditure on widening. Ownership by each of the four railways of various alternative routes has also permitted the diversion of trains to the less fully occupied lines, at any rate in times of peak traffic, as witness the use made by the London Midland and Scottish Railway of sections of its Midland Division main lines, and the use of Marylebone by the London and North Eastern Railway as the departure station for traffic destined to north-east coast towns.

The most important changes in Table 8 naturally result from the ever-extending network of electrified lines on the Southern Railway, but the 1938 figures will show further increases with the completion of the Wirral section of the London Midland and Scottish Railway, the extension of electrification to the south bank of the Tyne by the London and North Eastern Railway, and the Southern's main line from Dorking to Horsham, Littlehampton, Bognor and Havant, where connection is made with the main line from Waterloo to Portsmouth, already electrified. With a few notable exceptions, chiefly in the Manchester area, the whole of this electrified mileage utilises the third or fourth rail system of current feed, though certain lines now under conversion, such as Manchester—Sheffield and Liverpool Street—Shenfield, will make use of the overhead feed system. The reduction in London and North Eastern Railway mileage in 1935 reflected the abandonment of electric traction on the Newport—Shildon freight line.

TABLE 8.

Mileage of Electrified Lines—Length of Road.

	1923	1929	1930	1931	1932
L.M.S. ..	103	106	106	106	113
L.N.E. ..	57	58	58	58	58
G.W.R. ..	8	8	8	8	8
S.R. ..	85	278	307	307	325
Total ..	253	450	479	479	504

	1933	1934	1935	1936	1937
L.M.S. ..	113	113	113	113	113
L.N.E. ..	58	58	40	40	40
G.W.R. ..	8	8	8	8	8
S.R. ..	359	363	449	450	545
Total ..	538	542	610	611	706

Few tables in this review show more clearly the great strides in efficiency made by the British railways during the fifteen years than the data assembled in Table 9.

The fall in the number of steam locomotives since 1923 of 4,200 is an achievement redounding to the credit of many departments, the Mechanical Engineering for its improved designs, the Running Department for the increased mileage obtained per annum, and the Operating Department for the train schedules which permit of this extra mileage. As will be seen later, a train mileage, considerably greater than in 1923, has been worked in 1937 by about 3,800 fewer locomotives, leaving out of account the Southern Railway on which a reduction of 444 steam locomotives has been more than balanced by the addition of 1,143 electric rail motor vehicles, as is shown in Table 11.

The improvement in the locomotive repair position is reflected in Table 10; the number under or awaiting repair at the end of 1937 was about 2,700, or nearly 70 per cent. less than in 1923. The remarkable progress attained in this respect during 1923—1931, though dropping back somewhat during the most acute years of the depression when there was more than ample power available for the then existing demand, was re-attained in 1937 with the low figure of 6.1 per cent. of total stock, which compares very favourably with the results obtained by railways abroad.

The progressive system of repairs, employment of the latest types of machinery in the workshops, together with the steadily growing proportion of standard type locomotives, resulting in the much reduced time for a general overhaul or light repairs, as well as concentration of work on the largest and best equipped shops, have all contributed to the highly satisfactory results obtained, and borne witness to by the figures in Tables 9 and 10.

TABLE 9.

Number of Locomotives.

		Steam Locomotives.				
		1923	1929	1930	1931	1932
L.M.S.	..	10,289	9,797	9,319	9,032	8,450
L.N.E.	..	7,388	7,378	7,316	7,194	7,092
G.W.R.	..	3,944	3,871	3,861	3,857	3,745
S.R.	..	2,258	2,044	2,023	2,016	1,999
Total	..	23,879	23,090	22,519	22,099	21,286
		1933	1934	1935	1936	1937
L.M.S.	..	8,225	7,996	7,885	7,660	7,657
L.N.E.	..	6,901	6,846	6,787	6,718	6,576
G.W.R.	..	3,754	3,608	3,593	3,587	3,632
S.R.	..	1,927	1,919	1,900	1,852	1,814
Total	..	20,807	20,369	20,165	19,817	19,679

Locomotives Other than Steam—1937.

		Electric	Petrol	Diesel Oil (Mechanical Transmission)	Diesel Oil (Electrical Transmission)
L.M.S.	..	—	—	9	22
L.N.E.	..	13	2	—	—
G.W.R.	..	—	—	—	1
S.R.	..	—	—	—	3
Total	..	13	2	9	26

TABLE 10. Steam Locomotives Under or Awaiting Repair at December 31st.

	1923	1929	1930	1931	1932
L.M.S. ..	1,958	554	377	383	440
L.N.E. ..	896	564	536	498	509
G.W.R. ..	774	445	339	332	426
S.R. ..	266	153	151	137	136
Total ..	3,894	1,716	1,403	1,350	1,511
	1933	1934	1935	1936	1937
L.M.S. ..	593	512	664	437	362
L.N.E. ..	475	465	396	415	337
G.W.R. ..	451	363	334	303	344
S.R. ..	157	144	137	149	156
Total ..	1,676	1,484	1,531	1,304	1,199

Percentage of Total Stock.

	1923	1929	1930	1931	1932
	%	%	%	%	%
L.M.S. ..	19.0	5.7	4.0	4.2	5.2
L.N.E. ..	12.1	7.6	7.3	6.9	7.2
G.W.R. ..	19.6	11.5	8.8	8.6	11.4
S.R. ..	11.8	7.5	7.5	6.8	6.8
Total ..	16.3	7.4	6.2	6.1	7.1
	1933	1934	1935	1936	1937
	%	%	%	%	%
L.M.S. ..	7.2	6.4	8.4	5.7	4.7
L.N.E. ..	6.9	6.8	5.8	6.2	5.1
G.W.R. ..	12.0	10.1	9.3	8.4	9.5
S.R. ..	8.1	7.5	7.2	8.0	8.6
Total ..	8.1	7.3	7.6	6.6	6.1

TABLE 11.

Number of Rail Motor Vehicles.

Electric Rail Motor Vehicles.

	1923	1929	1930	1931	1932
L.M.S. ..	273	310	305	293	301
L.N.E. ..	87	87	87	87	87
G.W.R. ..	20	20	20	20	20
S.R. ..	251	823	881	905	1,031
Total ..	631	1,240	1,293	1,305	1,439
	1933	1934	1935	1936	1937
L.M.S. ..	251	250	250	249	249
L.N.E. ..	86	82	82	82	108
G.W.R. ..	20	20	20	20	20
S.R. ..	1,031	1,059	1,155	1,183	1,394
Total ..	1,388	1,411	1,507	1,534	1,771

Rail Motor Vehicles Other than Electric—1937.

		Steam	Diesel (Mechanical Transmission)	Diesel (Electrical Transmission)
L.M.S.	..	5	3	—
L.N.E.	..	80	—	4
G.W.R.	..	—	18	—
S.R.	..	1	—	—
Total	..	86	21	4

Whilst the use of diesel traction has not been developed by the British railways to the extent which is so much in evidence in France, Germany and other European countries, not to mention the United States, the number of units now in service is likely to increase, and the second sections of Tables 9 and 11 set out the railway ownership of other than steam locomotives and electric rail motor vehicles as at the end of 1937.

In comparing the rapid development of diesel railcars abroad as, for instance, in France, where over 650 are in service, it should be remembered that the density of population is much higher in Great Britain, that France is a coal importing country, that the British railways during the last ten years, as a result of their financial interests in bus operating companies, have been able to withdraw passenger train services from several hundred miles of branch line, and the configuration of the railway network of the British railways is very different from that of France which possesses very few short dead-end branches serving country towns.

Railcar services in Continental Europe largely serve cross-country routes, or have been used to increase the train frequency on main lines. The train density in Great Britain is, on the average, much higher than in other countries, and consequently the problem of finding many additional paths for railcar services would often be one of considerable difficulty. For lines of light traffic the pull and push steam train, which can be easily strengthened when required, has been found very satisfactory, although in certain cases it has been possible to use railcars, more particularly on the London and North Eastern Railway which put a number of Sentinel-type steam cars into service between about 1928 and 1933. On the Great Western Railway, the 18 diesel railcars were, during the winter of 1937—1938, contributing 3 per cent. of the total passenger train mileage; a further 20 are to be acquired, and in the spring of 1938 the London Midland and Scottish Railway placed in service a three-car diesel-engined train.

In Table 12 will be found the data as to passenger carriages and their seating capacity. Within the period 1923—1937, the four- and six-wheeled passenger carrying vehicles, with few exceptions, have been withdrawn from regular service, and those that remain are only pressed into service at times of peak passenger travel in summer months. In this respect, the British railways have made greater progress than those of other European countries. Over this period, heavy expenditure has been incurred on the conversion of many vehicles from gas to electric lighting, and no passenger carrying vehicles have been constructed with gas lighting since the four main line companies were formed; on two railways, electric cooking is extensively used; the other two railways have adhered to gas for cooking.

Whereas the actual number of passenger carriages fell consistently from 1923 to 1937, the latter being the first year to show an increase on its predecessor, the seating capacity reached a peak in 1930, and the capacity in 1937 exceeded that of 1923 by 14,000 at slightly over 2½ million.

Table 12 gives no hint of the remarkable increase in comfort provided for the passenger if one compares the carriages placed in service in 1937 with those of 1923. Better lighting, arm rests in third class compartments, ventilation without draughts, better sprung and wider seats, not to mention modern decoration, furnishing and fittings have added greatly to the comfort and pleasure of long-distance travel, whilst the special high-speed expresses have heralded a new era in European passenger carriage design.

If the increase in comfort has been great, safety has been equally considered, and the strength of the modern train, constructed to the extent of 70-80 per cent. of metal, is immeasurably greater than its older counterpart. Bogie articulation, strengthened buffer design, stronger vestibules and ends, and in some cases buck-eye centre couplings have all played their part in providing for increased safety.

A measure of the progress made in facilities is to be found in Table 13, and the development of the kitchen car with its ability to serve a large number of meals is a pioneering British railway achievement of no mean order. Buffet cars have also proved profitable with the growing demand from all classes of passenger for the lighter type of meal. The period under review also witnessed the inauguration of sleeping cars for third-class passengers in 1928.

TABLE 12.

Passenger Carriages*.					
(Steam and Electric Train Services).					
	1923	1929	1930	1931	1932
L.M.S. ..	19,663	19,771	19,536	19,059	18,679
L.N.E. ..	14,314	13,748	13,620	13,409	12,965
G.W.R. ..	6,768	6,820	6,768	6,576	6,343
S.R. ..	7,469	7,035	7,089	6,911	7,068
Total ..	48,214	47,374	47,013	45,955	45,055
	1933	1934	1935	1936	1937
L.M.S. ..	18,171	17,911	17,546	17,522	17,409
L.N.E. ..	12,730	12,611	12,613	12,538	12,430
G.W.R. ..	6,185	6,167	6,143	6,128	6,248
S.R. ..	6,963	6,757	6,695	6,464	6,682
Total ..	44,049	43,446	42,997	42,652	42,769

* Including rail motor vehicles.

Seating Capacity (000's).					
	1923	1929	1930	1931	1932
L.M.S. ..	1,018	1,117	1,121	1,109	1,106
L.N.E. ..	721	736	732	724	702
G.W.R. ..	350	370	371	366	357
S.R. ..	401	408	411	402	412
Total ..	2,490	2,631	2,635	2,601	2,577
	1933	1934	1935	1936	1937
L.M.S. ..	1,091	1,073	1,055	1,056	1,057
L.N.E. ..	691	684	689	685	681
G.W.R. ..	351	351	353	354	362
S.R. ..	406	398	398	390	404
Total ..	2,539	2,506	2,495	2,485	2,504

TABLE 13.

		Number of Restaurant Cars. (Including Kitchen Cars).				
		1923	1929	1930	1931	1932
L.M.S.	..	209	257	264	253	270
L.N.E.	..	215	232	237	241	237
G.W.R.	..	70	116	116	127	141
S.R.	..	31	53	73	59	69
Total	..	525	658	690	680	717
		1933	1934	1935	1936	1937
L.M.S.	..	277	276	276	296	299
L.N.E.	..	257	274	291	299	325
G.W.R.	..	141	143	151	151	160
S.R.	..	69	79	96	92	111
Total	..	744	772	814	838	895
		Number of Sleeping Cars.				
		1923	1929	1930	1931	1932
L.M.S.	..	84	121	206	223	211
L.N.E.	..	59	98	112	115	119
G.W.R.	..	11	15	26	27	27
S.R.	..	—	—	—	—	—
Total	..	154	234	344	365	357
		1933	1934	1935	1936	1937
L.M.S.	..	221	221	232	225	224
L.N.E.	..	117	121	122	121	129
G.W.R.	..	27	30	29	27	27
S.R.	..	—	—	—	—	—
Total	..	365	372	383	373	380

From Table 14 it will be seen that the percentage of gross railway receipts derived from passenger train traffic fluctuated over the fifteen years; comparing 1929 with 1923, except on the Southern Railway, the passenger traffic has dropped more than freight; the Southern Railway itself revealed a rise from 73 to 74 per cent., presumably due to electrification. To the same cause may be attributed the rise to 77 per cent. in 1937, a figure never previously attained. The Great Western Railway's passenger percentage in 1937 revealed no change on 1929, but passenger train traffic represented 2 per cent. more of the total receipts of the London and North Eastern Railway, and 1 per cent. in the case of the London Midland and Scottish Railway. It will be noted that on the London Midland and Scottish, London and North Eastern and Great Western Railways passenger train traffic receipts in 1937 were still proportionately less than in 1923.

TABLE 14. Percentage of Gross Railway Receipts Derived from Passenger Train Traffic.

		1923	1929	1930	1931	1932
		%	%	%	%	%
L.M.S.	..	41	39	40	40	41
L.N.E.	..	38	34	35	36	37
G.W.R.	..	43	41	42	42	43
S.R.	..	73	74	74	73	74
		1933	1934	1935	1936	1937
		%	%	%	%	%
L.M.S.	..	42	41	41	40	40
L.N.E.	..	37	36	36	36	36
G.W.R.	..	43	42	42	41	41
S.R.	..	75	74	76	76	77

TABLE 15. Number of Merchandise and Mineral Wagons—Excluding Brake Vans.

	1923	1929	1930	1931	1932
L.M.S. ..	297,201	292,476	286,868	283,310	276,981
L.N.E. ..	277,201	268,510	268,380	264,385	258,776
G.W.R. ..	83,905	83,360	83,327	83,097	81,301
S.R. ..	34,657	33,531	33,351	33,823	33,814
Total ..	692,964	677,877	671,926	664,615	650,872
	1933	1934	1935	1936	1937
L.M.S. ..	267,198	264,842	265,653	268,140	276,259
L.N.E. ..	250,387	243,480	240,510	239,753	249,155
G.W.R. ..	79,069	78,138	78,223	78,034	81,370
S.R. ..	33,144	32,610	32,712	33,021	32,971
Total ..	629,798	619,070	617,098	618,948	639,755

Average Capacity per Wagon (Tons).

	1923	1929	1930	1931	1932
L.M.S. ..	9.82	10.82	10.89	10.95	11.01
L.N.E. ..	11.23	11.91	12.02	12.06	12.12
G.W.R. ..	10.44	10.87	10.93	10.99	11.04
S.R. ..	9.97	10.44	10.55	10.64	10.68
Total ..	10.47	11.24	11.33	11.38	11.44
	1933	1934	1935	1936	1937
L.M.S. ..	11.13	11.26	11.38	11.59	11.65
L.N.E. ..	12.20	12.29	12.36	12.44	12.60
G.W.R. ..	11.08	11.12	11.19	11.27	11.34
S.R. ..	10.76	10.96	11.12	11.17	11.22
Total ..	11.53	11.63	11.72	11.86	11.96

In regard to Table 15, the year 1937 witnessed the first important increase in the total railway ownership of wagons. Whilst it would be impossible to comment, except at great length, on the composition of this table, it may be noted that the totals give little indication of the vast internal changes year by year; thus in the period 1935—1937 inclusive no fewer than about 65,000 new wagons were placed in service, but the rise in total on this period is only about 22,700; these figures will give some idea of the large number of obsolete wagons which have been taken out of service. The increase in average capacity over the fifteen years amounts to $1\frac{1}{2}$ tons, the greatest change being on the London Midland and Scottish Railway, which had the lowest figure in 1923.

The high London and North Eastern Railway average is accounted for by the large number of 20-ton wagons in use on the North-east coast; mine screens are being gradually rebuilt, and the circulation of 20-ton wagons for coal traffic is steadily increasing. The standard capacity for general merchandise wagons remains at 12 tons, and, therefore, it is unlikely that the figure of 11.96 will continue to rise so fast in the future.

These average capacity figures, however, also include "special" wagons, some of which have very high load capacities. This is a noteworthy feature of British railway practice, as such wagons in other countries are usually provided by the industries which require them.

With the ever-increasing number of fast freight trains, conspicuous progress has been made in regard to the provision of wagons fitted with vacuum brakes, no fewer than 80,388 such wagons being in service at the beginning of 1937.

Mention should also be made of the large number of containers of varied types totalling 13,800 in 1937, a remarkably rapid development since 1927, and one in which the British railways have occupied a foremost place.

V. ANCILLARY BUSINESSES.

A somewhat disproportionate amount of space was allocated to this section in previous editions of this review and, in view of the comparatively small changes which occur from year to year, in many of the tables it is felt that data for 1923, 1929, 1932, 1936 and 1937 will prove adequate; similarly, the comments on the figures in Tables 16—26 inclusive have been kept as short as is compatible with clarity.

Road Transport, Passenger.

Table 16 reveals the change in policy resulting from the passage of the Railway Companies Road Transport Acts in 1928, and the transfer of many of the railways' passenger vehicles to the associated bus companies. Those that have remained in railway ownership are, in reality, the respective shares of the London Midland and Scottish and the London and North Eastern Railways in the services jointly owned with certain municipalities, chiefly in Yorkshire, for example, Sheffield.

It may be noted that the Great Western Railway, practically the first motor bus operator in Great Britain, transferred its last buses in 1933.

TABLE 16. Passenger Road Motor Vehicles Owned by the Railways.

	1923	1929	1932	1936	1937
L.M.S. ..	5	54	117	121	122
L.N.E. ..	58	77	40	45	46
G.W.R. ..	95	108	4	—	—
S.R. ..	1	—	—	—	—
Total ..	159	239	161	166	168

Road Transport, Freight, including Collection and Delivery of Parcels and Goods.

Table 17 sets out the data with regard to the railways' lorries, mechanical horses, trailers, horse carts and horses.

The large majority of this huge fleet is employed on collection and delivery work, the cartage radius in many towns having been greatly extended, and over wide rural areas railway vehicles serve farms and houses many miles from the railway stations.

The railways also carry a steadily growing volume of freight traffic throughout by road, gross receipts of nearly £350,000 being earned in 1937.

Collection and delivery services have always been a special feature of British railway practice, and, whilst the apparent financial loss shown in its operation tends to increase with the volume of traffic handled, it has served as a most important factor in retaining traffic to the railways which would otherwise have probably passed by road. The apparent deficit on this collection and delivery service was rather over £1,000,000 in 1937.

It is of interest to observe that railways in other countries are now following the long existent British practice in this respect, and organising collection and delivery services, in some cases on a gratuitous basis, believing in the policy as an essential for the retention of traffic.

The steady motorisation of the fleet will be seen from the figures in Table 17, and the gradual reduction in the number of horses used for shunting purposes in Table 18.

TABLE 17. Road Vehicles and Horses for Parcels and Goods Traffic.

		Motor Vehicles.				
		1923	1929	1932	1936	1937
L.M.S.	..	1,357	1,775	1,952	3,035	3,270
L.N.E.	..	198	700	1,615	3,249	3,532
G.W.R.	..	392	1,148	1,604	2,182	2,324
S.R.	..	140	316	430	609	655
Total	..	2,087	3,939	5,601	9,075	9,781

		Horse Wagons and Carts.				
		1923	1929	1932	1936	1937
L.M.S.	..	19,432	17,439	16,672	15,936	16,344
L.N.E.	..	6,989	8,986	7,679	5,212	4,783
G.W.R.	..	3,974	4,013	3,703	3,022	2,947
S.R.	..	1,932	1,550	1,407	1,047	1,001
Total	..	32,327	31,988	29,461	25,217	25,075

		Horses for Road Vehicles.				
		1923	1929	1932	1936	1937
L.M.S.	..	9,370	9,187	7,840	8,251	8,154
L.N.E.	..	4,642	5,406	3,714	2,372	2,193
G.W.R.	..	2,606	2,574	1,975	1,731	1,664
S.R.	..	1,465	1,212	942	771	731
Total	..	18,083	18,379	14,471	13,125	12,742

TABLE 18.

		Horses for Shunting.				
		1923	1929	1932	1936	1937
L.M.S.	..	391	244	168	138	127
L.N.E.	..	547	362	260	233	202
G.W.R.	..	125	96	35	27	23
S.R.	..	67	38	37	27	28
Total	..	1,130	740	500	425	380

Steamboats.

Since 1923, almost all the railway owned steamboats on cross-Channel regular passenger services, which were built prior to 1914, have been replaced by more luxurious, yet more economical, vessels, and through careful reorganisation of the services much duplication has been eliminated, a practice exemplified by the concentration of the London and Midland Scottish Belfast services on Heysham. Reorganisation on such lines enabled the services to be run with fewer vessels, but the numbers in Table 19 do not fully reflect this change, because larger vessels, in replacement of those figuring in Table 20, in earlier years, have now to be included in Table 19. It will be noted that the number of vessels of 250 tons net and under has fallen from 71 to 41 in the fifteen years.

Steamboat services and the receipts therefrom have suffered very seriously from the long years of trade depression, the imposition of tariffs and quotas with their effect on international trade, whilst the fluctuation of exchange rates has caused major fluctuations in the flow and direction of tourist travel. The peak of net receipts from steamboats occurred in 1929, and it is satisfactory to record that the results for 1937 fell short of that peak by only £60,000; to some extent, the Coronation festivities account for this gratifying result, but the cost of operating the various services has been greatly reduced since 1923, and on certain routes the pooling of traffic or amalgamation of services has made possible large-scale economies. The inauguration of the Dover-Dunkirk train ferries of the Southern Railway in October, 1936, was a landmark in the improvement of cross-Channel facilities.

The train ferry services for freight traffic between Harwich and Zeebrugge, which commenced in 1924, have continued to operate continuously since then. The three ferry steamers used on this latter service originally belonged to a separate company, but since 1933 they have been included in the fleet of the London and North Eastern Railway.

TABLE 19. Steamboats—Over 250 tons net.

	1923		1929		1932		1936		1937	
	No.	Net Regd. Tonnage	No.	Net Regd. Tonnage	No.	Net Regd. Tonnage	No.	Net Regd. Tonnage	No.	Net Regd. Tonnage
L.M.S. ..	50	29,210	43	26,585	35	23,927	28	21,135	27	20,851
L.N.E. ..	22	17,845	21	17,859	20	19,291	22	21,772	21	21,099
G.W.R. ..	9	5,682	9	5,561	11	6,899	10	6,562	10	6,624
S.R. ..	17	9,797	31	18,281	34	20,331	32	20,902	32	20,913
Total ..	98	62,534	104	68,286	100	70,448	92	70,371	90	69,487

TABLE 20. Steamboats—250 tons net and under.

	1923		1929		1932		1936		1937	
	No.	Net Regd. Tonnage	No.	Net Regd. Tonnage	No.	Net Regd. Tonnage	No.	Net Regd. Tonnage	No.	Net Regd. Tonnage
L.M.S. ..	18	2,278	17	2,192	15	1,804	15	1,910	12	1,360
L.N.E. ..	18	2,048	19	2,107	17	1,840	13	1,474	12	1,311
L.M.S. & L.N.E. Jt.	6	642	5	588	5	588	4	494	4	494
G.W.R. ..	8	1,289	8	612	4	399	4	399	4	399
S.R. ..	21	3,618	13	1,827	13	1,759	9	993	9	1,076
Total ..	71	9,875	62	7,326	54	6,390	45	5,270	41	4,640

TABLE 21. Steamboats—Net Receipts.

	1923	1929	1932	1936	1937
	£	£	£	£	£
L.M.S. ..	19,084	208,222	104,303	292,639	304,287
L.N.E. ..	35,721	131,474	-72,151	20,718	49,027
G.W.R. ..	-45,389	-1,206	14,109	17,594	19,951
S.R. ..	363,648	432,155	52,821	101,059	337,542
Total ..	373,064	770,645	99,082	432,010	710,807

Canals.

The information in Tables 22 and 23 calls for but brief comment. The criticism often voiced that the railways have never played their due part in the development of canal traffic is not valid if the history of British canals is carefully studied. Railway ownership of canals arose mainly from the reason that it was part of the price the railway had to pay for obtaining its Act. Those who claim that the railways killed the canals often forget that the canals had in their day caused the abandonment of many previously profitable road services. The problem which the railways have had to face is how to divest themselves of sections of canals which can never hope to prove profitable. Linked closely with the supply of water over wide areas, the problem of abandonment is not easy, and in the fifteen years the railway owned canal mileage has only dropped by 64 miles. The annual financial losses, though decreased by 58 per cent., were still, unfortunately, as high as £64,000 in 1937.

TABLE 22.

		Canals.				
		Length Owned and Leased.				
		1923	1929	1932	1936	1937
		Miles	Miles	Miles	Miles	Miles
L.M.S.	..	550	543	537	536	536
L.N.E.	..	291	285	246	246	246
G.W.R.	..	213	212	211	210	210
S.R.	..	3	3	5	5	1
Total	..	1,057	1,043	999	997	993
		Net Receipts.				
		£	£	£	£	£
L.M.S.	..	-80,601	-13,721	-15,696	-19,304	-33,771
L.N.E.	..	-41,572	-20,144	-12,464	-13,253	-12,522
G.W.R.	..	-32,256	-31,032	-25,110	-17,090	-19,344
S.R.	..	347	571	706	915	971
Total	..	-154,082	-64,326	-52,564	-48,732	-64,666

Docks, Harbours and Wharves.

The year 1937, which witnessed such a gratifying revival of international trade and much better employment of British shipping, brought back to this section of the railways' activities a considerable improvement in net receipts, a figure exceeding £1,000,000 being achieved, which actually surpassed the results of 1929. Even so, the net receipts for 1937 fell short of those for 1923 by over £250,000.

Many of the railway owned docks are connected with the fortunes of the coal export and bunker trade, more especially the South Wales ports, the Hartlepoons, Blyth and several Scottish ports, and the figures in a later table show how grievously this trade has suffered since 1923, from manifold causes, but not least the replacement of coal by oil and hydro-electric power.

The successful development of Southampton by the Southern Railway provides sufficient answer to those who claim that railways are not appropriate owners of ports and harbour facilities. On specialist lines, the growth of Fleetwood, Grimsby and Hull as fish landing ports, also brings considerable credit to the railways concerned. The trading results of the railway owned ports, and receipts, reflect the rise or fall of the country's foreign trade; much of the expenditure is of a fixed nature, varying but little with the fluctuations in tonnage handled, and for this reason increase of trade rapidly improves the financial position, the results depending largely on world economic and other conditions, concerning which the railways can have but little control.

TABLE 23. Docks, Harbours and Wharves—Length of Quay (in feet).

	1923	1929	1932	1936	1937
L.M.S. ..	95,925	95,957	96,574	92,090	92,090
L.N.E. ..	200,883	209,902	203,660	209,124	197,814
G.W.R. ..	171,894	173,204	164,953	164,245	163,955
S.R. ..	42,827*	42,375*	41,908*	49,917*	49,892*
Total ..	511,066	520,975	506,632	514,913	503,288

* Includes 463 feet proportion of length jointly owned.

TABLE 24. Docks, Harbours and Wharves—Net Receipts.

	1923	1929	1932	1936	1937
	£	£	£	£	£
L.M.S. ..	18,174	-87,890	-85,084	12,829	35,247
L.N.E. ..	403,007	198,267	63,264	183,646	247,851
G.W.R. ..	718,162	560,032	145,193	119,701	342,382
S.R. ..	119,935	317,847	262,449	357,653	379,444
Total ..	1,259,278	988,256	385,822	673,829	1,004,924

Hotels, Refreshment Rooms and Dining Cars.

Almost all the large railway owned and operated hotels have been greatly improved and modernised, notably in regard to the supply of running water to bedrooms, and additional bathrooms, since 1923. These long continuing programmes, necessarily spread over an extensive period, have served to keep railway hotels in the forefront of British hotel practice, and, although the demand for improvements is continuous because tastes and fashions vary each year, these major extensions and reconstructions are drawing to a close. Several hotels have been sold or have been converted into offices, for example, the London Midland and Scottish hotel at St. Pancras Station, and the Southern Railway hotel at Cannon Street Station, and the total number has decreased by 10 to 74 over the fifteen years. Specific mention may be made of the latest hotel reconstruction by the London Midland and Scottish Railway at Leeds, the Paddington Station Hotel, the Manor House Hotel of the Great Western Railway at Moretonhampstead, the latter having been acquired during the period under review, the extension of the Southern Railway's hotel at Southampton, and the internal reconstruction of many London and North Eastern Railway's hotels, notably Liverpool Street (London), York, Edinburgh and Glasgow.

The increase in dining, kitchen and buffet cars has been noted in a previous section; indeed, the demand for catering on trains would appear to offer still further openings in the future, although it is only by test and trial that the most satisfactory service for each individual train can be assessed.

The margin of profit has fallen, however, as the figures in Table 26 show clearly, and net receipts in 1937 were still about £270,000 below those of 1923; the lowest point was touched in 1932 when purchasing power was at a minimum.

Mention may be made of the close attention now being given to the improvement of station buffets and restaurants, a matter which has not in the past been concentrated upon to the same extent as the hotels and dining cars.

TABLE 25.

Number of Hotels.

	1923	1929	1932	1936	1937
L.M.S. ..	35	32	33	30	30
L.N.E. ..	30	30	30	28	28
L.M.S. and L.N.E. Jt.	1	1	1	1	1
G.W.R. ..	8	8	7	7	7
S.R. ..	10	10	9	9	8
Total ..	84	81	80	75	74

TABLE 26.

Hotels, Refreshment Rooms and Dining Cars—Net Receipts.

	1923	1929	1932	1936	1937
	£	£	£	£	£
L.M.S. ..	571,213	441,351	278,660	388,872	353,009
L.N.E. ..	214,129	209,787	64,349	164,146	165,459
G.W.R. ..	63,872	60,675	56,858	78,298	40,157
S.R. ..	5,738	505	-4,765	8,710	17,435
Total ..	854,952	712,318	395,102	640,026	576,060

Air Services.

The last ancillary business to warrant attention is the latest to be inaugurated, namely, air services. In 1929 each of the four main line railways obtained Parliamentary powers to acquire interests in, or to operate, air transport services. This step was taken largely with a view to safeguarding the interests of the railways in the event of any considerable development of commercial air services in the future. No action, other than the acquisition by the Southern Railway of a small shareholding in Imperial Airways, was accordingly taken until 1933, when in May of that year a service was inaugurated by the Great Western Railway between Birmingham, Cardiff and Plymouth; it was maintained with aircraft and personnel provided by Imperial Airways.

In the following year, a further step was taken through the formation of a special company, bearing the name "Railway Air Services, Limited," with a nominal capital of £50,000 subscribed equally by each of the four main line railways and by Imperial Airways. The Great Western Railway route was taken over by the new company and extended to Liverpool, and at the same time a service between London and the Isle of Wight was arranged by Spartan Air Lines in conjunction with the Southern Railway and Railway Air Services. In August, 1934, Railway Air Services began a service between London, Belfast and Glasgow, with a branch to the Isle of Man. This service was of importance in that it was the only one to continue operation throughout the winter, the others, including a route from Birmingham to the Isle of Wight, being restricted to the summer. The services worked by Railway Air Services have since continued along the same general lines, although there have been certain modifications and extensions, the principal development being in regard to increased frequency, notably on the Isle of Man route; this service now being operated by the Isle of Man Air Services, Limited in which Railway Air Services participate. In 1935, a company was formed with the assistance of the Great Western Railway and the Southern Railway to take over the services of Jersey Airways, which were being run between London, Southampton and Jersey. These services have since been maintained with support from the two railways concerned.

Air services operated in conjunction with the railways have been of a developmental or experimental character, and have, therefore, not been self-supporting. In 1933, there was a loss of £6,526 incurred by the Great Western Railway on the service inaugurated by it in that year. With the growth of the services, there has been an increase in the deficits which are borne by all the main line railways, except the London and North Eastern Railway, which has no direct interest in any air line. In 1936 and 1937, the net deficits were as follows :

		1936	1937
		£	£
L.M.S.	..	27,882	36,535
G.W.R.	..	8,712	9,830
S.R.	..	4,348	5,103
Total	..	40,942	51,468

VI. RAILWAY REVENUE.

Table 27 may be regarded as containing the key statistics of the report. It gives the financial data concerning the gross railway receipts, railway expenditure, net railway receipts, the operating ratio, net receipts of the ancillary businesses, and the interest and dividends on capital, for the base year 1923, the comparatively prosperous year 1929, and all subsequent years, including the periods of depression and recovery respectively.

Whilst detailed comment on each of the heads over this period of fifteen years is out of the question in this short review, the index numbers will enable the various fluctuations to be gathered quickly. In analysing this comprehensive table, due recognition should be given to certain events which the figures reflect, for instance, under the expenditure heads, the temporary deductions from all salaries and wages, applicable over the periods 1928—1929 and 1931—1937 in varying degree. For the years 1931—1935, two different sets of figures are equally correct, one set being those which appeared in the previous issue of this report, or on the same basis as those figures, and the second set revising the figures for those years in respect of the repayments made to the railways as a result of the final judgment on the railways' rating assessments.

Serious as was the fall of about 20 per cent. in railway receipts between 1929 and 1932, the decrease suffered by the British railways was not as severe as that suffered by many railways abroad, which, in some cases, approached 50 per cent., but, on the other hand, foreign railways in certain cases had been handling record traffics in 1926, 1928 or 1929, whereas the British railways' receipts had fallen by 7 per cent. between 1923 and 1929. On the expenditure side, the British railways were more severely restricted by labour agreements in making large scale staff economies than were some railways abroad.

Expressed shortly, the British economic and industrial activity is less subject to widespread fluctuations than, for example, the commercial activity and purchasing power in the United States and certain European countries.

The long-established system of national insurance can be regarded as a buffer whereby the incidence of such sudden shocks is mitigated, thus helping to flatten out curves drawn to represent the community's purchasing power from month to month and year to year.

Road competition became more severe in Great Britain at an earlier date than in most European countries, similarly earlier action was taken in regard to its control by legislation, at any rate in the passenger field; depression reached this country prior to its full force being felt in many foreign countries, and recovery started earlier and continued more steadily than elsewhere.

It may be regarded as a high tribute to British railway management that, in spite of the inroads of road competition and in the face of rising prices and rigidly adhered to agreements in regard to labour, the operating ratio in both 1936 and 1937 was lower than in 1923, and in both these years was within 1 per cent. of 1929. The fall in net revenue of over £7,000,000, when comparing 1929 and 1937, contrasts with a fall in gross railway receipts of over £16,000,000, the balance of net receipts from ancillary businesses being approximately the same.

In 1923, the net revenue of £45,600,000 benefitted from an item of £3,300,000 from interest (net); in the subsequent years 1929—1937 this has never reached the £1,000,000 mark.

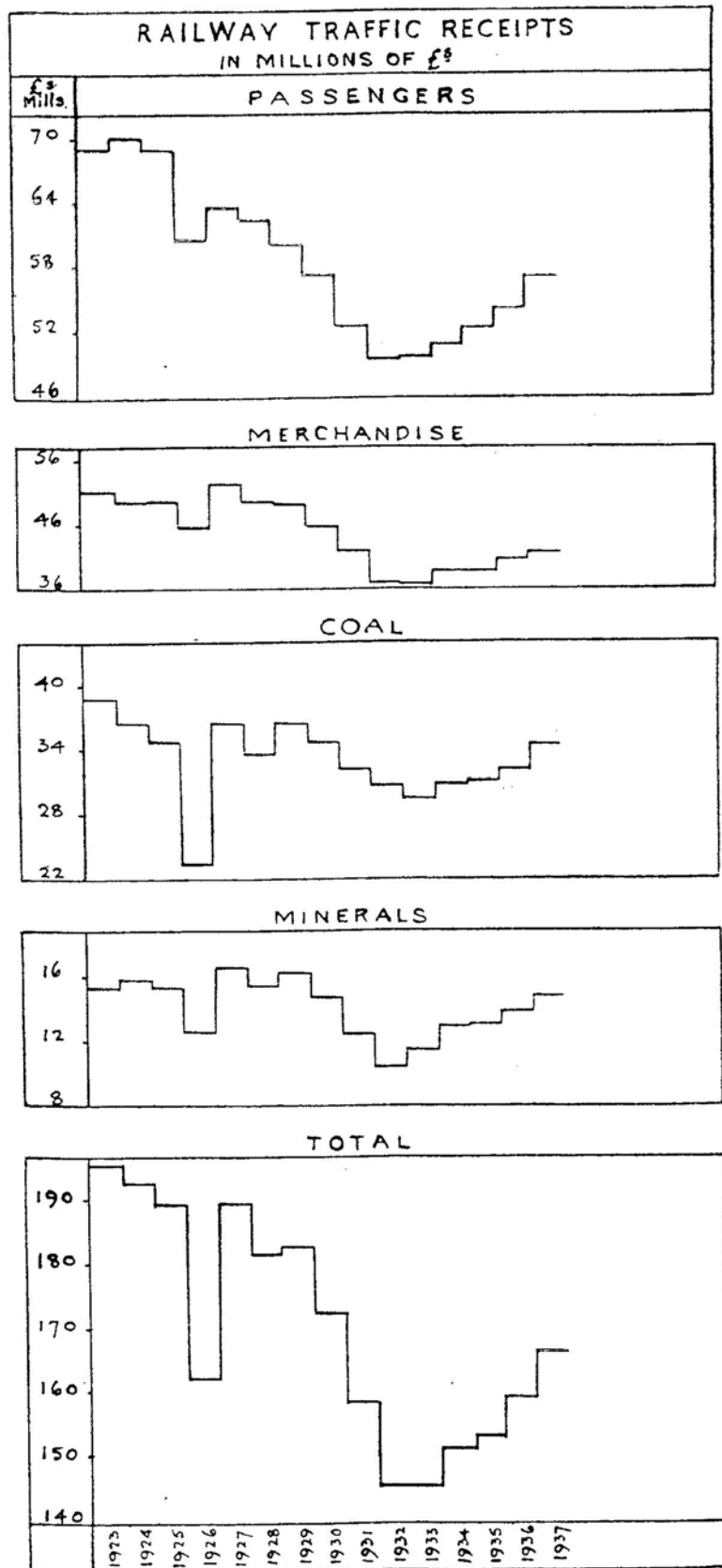
TABLE 27.
SUMMARY OF FINANCIAL RESULTS—FOUR COMPANIES
(Millions of Pounds and Percentage of 1923.)

	1923	1929	1930	1931	1932	1933	1934	1935	1936	1937
	£ Mill. %	£ Mill. %	£ Mill. %	£ Mill. %	£ Mill. %	£ Mill. %	£ Mill. %	£ Mill. %	£ Mill. %	£ Mill. %
RAILWAY Receipts.										
Passengers ..	68.9 100	60.0 87	57.0 83	52.4 76	49.2 71	49.4 72	50.6 73	52.0 75	54.0 78	56.7 82
Parcels, etc. ..	17.4 100	17.6 101	17.5 101	16.8 97	15.9 91	16.0 92	16.1 92	16.0 92	16.1 92	16.3 94
Merchandise ..	51.2 100	49.0 96	45.5 89	41.8 82	36.8 72	36.6 72	38.3 75	38.6 75	40.6 79	41.7 81
Minerals ..	15.3 100	16.2 106	14.6 96	12.3 81	10.3 67	11.3 74	12.8 84	12.9 85	13.7 90	14.6 96
Coal ..	38.9 100	36.5 94	34.6 89	32.1 83	30.4 78	29.4 76	30.7 79	31.0 80	32.1 82	34.4 88
Livestock ..	2.0 100	1.8 92	1.8 89	1.6 77	1.4 68	1.2 61	1.2 59	1.3 62	1.3 67	1.3 63
Sundry ..	1.9 100	1.7 91	1.6 87	1.5 81	1.4 74	1.4 74	1.4 77	1.4 77	1.5 82	1.6 85
Total ..	195.6 100	182.8 93	172.6 88	158.5 81	145.4 74	145.3 74	151.1 77	153.2 78	159.3 81	166.6 85
Expenditure.										
Maintenance—										
Way and Works ..	23.5 100	21.0 89	19.7 84	18.1 77	17.0 72	16.8 71	17.4 74	18.0 76	18.6 79	19.7 84
Rolling Stock ..	27.6 100	26.0 94	24.9 90	22.4 81	20.2 73	20.0 72	21.5 78	21.4 78	22.4 81	23.3 84
Locomotive Running—										
Fuel ..	15.3 100	12.1 79	11.8 77	11.3 74	10.8 70	10.7 70	10.9 71	11.1 72	11.7 76	12.5 82
Labour ..	20.7 100	19.8 96	19.8 95	18.2 88	17.3 83	16.8 81	17.2 83	17.5 84	18.1 87	18.9 91
Other ..	2.3 100	2.0 89	1.9 85	1.7 77	1.6 74	1.6 74	1.6 74	1.6 72	1.6 76	1.7 78
Traffic Expenses—										
Labour ..	41.5 100	38.6 93	38.5 93	36.0 87	34.1 82	33.3 80	33.6 81	33.9 82	34.7 84	35.8 87
Other ..	10.6 100	10.1 96	9.8 93	9.0 85	8.6 81	8.5 80	8.8 83	8.8 83	9.1 86	9.5 90
General ..	5.0 100	5.0 100	5.0 99	4.9 97	5.0 100	5.0 99	5.1 100	5.3 105	5.4 107	5.5 108
Rates ..	7.4 100	5.6 76	5.5 74	3.6 48	2.9 39	2.9 39	2.9 39	3.0 40	2.9 39	3.0 39
National Insurance ..	1.1 100	1.3 112	1.2 111	1.2 107	1.2 105	1.1 100	1.2 107	1.2 109	1.3 119	1.4 121
Other ..	1.9 100	1.0 53	0.8 43	0.6 33	0.6 34	0.6 34	0.6 36	0.7 37	0.8 42	0.9 49
Total ..	156.9 100	142.5 91	138.9 89	127.0 81	119.3 76	117.3 75	120.8 77	122.5 78	126.6 81	132.2 84
Operating Ratio ..	80.20 %	78.74 %	80.80 %	80.11 %	82.06 %	80.71 %	79.94 %	79.97 %	79.49 %	79.36 %
Railway Net Receipts ..	38.7 100	40.3 104	33.7 87	31.5 81	26.1 67	28.0 72	30.3 78	30.7 79	32.7 84	34.4 89
Joint Lines (Net) ..	0.7 100	0.8 112	0.6 87	0.5 67	0.3 43	0.4 57	0.4 59	0.5 68	0.5 77	0.7 103
Steamboats (Net) ..	0.4 100	0.8 207	0.7 179	0.5 126	0.1 27	0.2 56	0.3 70	0.3 91	0.4 116	0.7 191
Docks (Net) ..	1.2 100	1.0 79	0.9 68	0.6 49	0.6 46	0.6 46	0.7 57	0.7 54	0.7 54	1.0 80
Hotels, etc. (Net) ..	0.9 100	0.7 87	0.6 71	0.5 57	0.4 46	0.4 52	0.6 66	0.6 69	0.6 75	0.6 67
Collection and Delivery (Net) ..	-1.2 ..	-1.4 ..	-1.3 ..	-1.0 ..	-0.9 ..	-0.6 ..	-0.8 ..	-0.8 ..	-0.9 ..	-1.1 ..
Interest (Net) ..	3.3 100	0.9 27	0.6 19	0.5 15	—	-0.3 ..	-0.2 ..	-0.4 ..	-0.7 ..	-0.7 ..
Sundry (Net) ..	1.6 100	1.9 123	1.9 124	2.0 130	2.1 139	2.3 146	2.4 155	2.4 156	2.4 155	2.3 149
NET REVENUE ..	45.6 100	45.0 99	37.7 83	35.1 77	28.7 63	31.0 68	33.7 74	34.0 75	35.7 78	37.9 83
Net Percentage of Capital Receipts ..	4.40 100	4.17 95	3.48 79	3.23 73	2.64 60	2.84 65	3.09 70	3.11 71	3.27 74	3.47 79
Interest & Dividends Paid ..	46.7 100	44.3 95	39.6 85	34.4 74	28.1 60	30.1 65	32.4 69	33.6 72	35.7 77	37.5 80
Interest Percentage of Capital Receipts ..	4.51 100	4.11 91	3.66 81	3.17 70	2.58 57	2.76 61	2.97 66	3.08 68	3.27 73	3.43 76

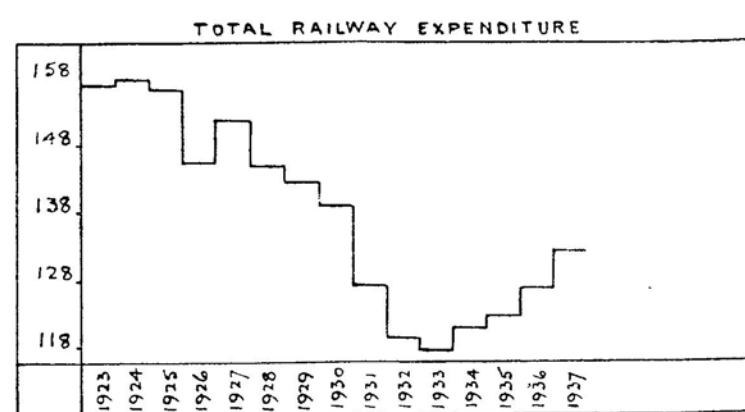
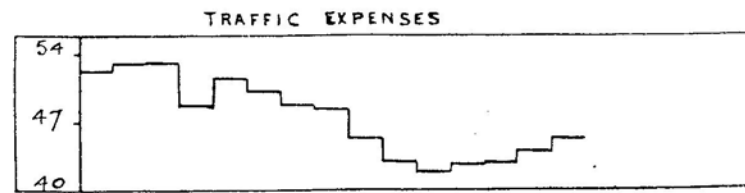
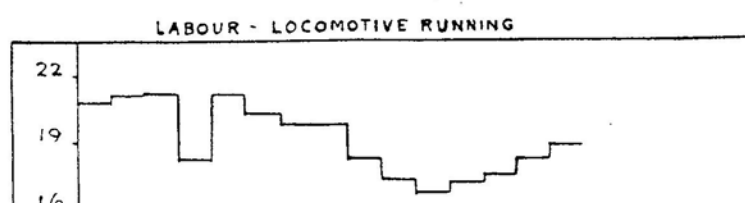
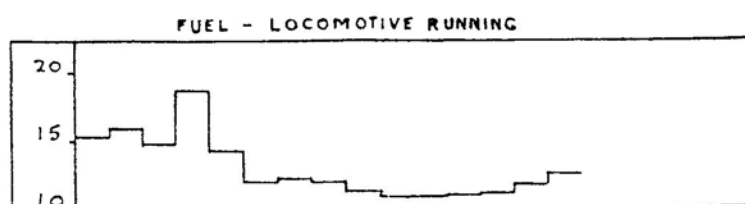
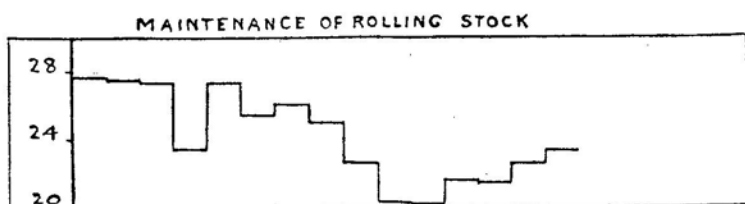
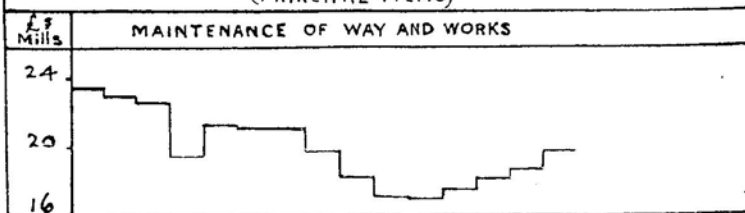
NOTE.—The percentages have been calculated on the actual amounts and not on the approximate values shown above.

TABLE 27. Figures Before Correction for Revised Basis of Local Rates Payments.

	1931		1932		1933		1934		1935	
	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%
Rates	5.2	70	5.0	67	5.0	67	5.0	67	4.0	53
Total Expenditure ..	128.6	82	121.4	77	119.4	76	122.9	78	123.5	79
Operating Ratio ..	81.14	..	83.51	..	82.15	..	81.32	..	80.64	..
Railway Net Receipts	29.9	77	24.0	62	25.9	67	28.2	73	29.7	77
Joint Lines (Net) ..	0.4	65	0.3	42	0.4	56	0.4	58	0.5	66
Docks (Net) ..	0.5	38	0.4	30	0.4	31	0.5	41	0.5	40
Hotels, etc. (Net) ..	0.5	57	0.4	46	0.5	52	0.6	66	0.6	69
Collection and Delivery (Net) ..	-1.0	..	-1.0	..	-0.7	..	-0.8	..	-0.8	..
Sundry (Net) ..	2.1	133	2.2	146	2.4	153	2.5	162	2.5	163
Net Revenue £ Mill...	33.4	73	26.4	58	28.8	63	31.5	69	32.9	72
Net Percentage of Capital Receipts %	3.08	70	2.43	55	2.64	60	2.88	65	3.01	..



RAILWAY EXPENDITURE
IN MILLIONS OF £^s
(PRINCIPAL ITEMS)



Passenger Receipts.

Receipts from passengers carried are shown in Table 28, but they do not include revenue derived from the other traffic carried by passenger train such as mails, parcels, etc.

Taking the four companies together, the receipts in 1937 almost attained the figures of 1930, but were 18 per cent. below those of 1923, and there is a wide difference between the results of the four railways individually, the Southern Railway in 1937 exceeding even its 1929 results, and almost attaining its 1923 achievement, doubtless due to the frequency and convenience of its electrified services on which considerable capital expenditure had been incurred during the intervening years.

The London and North Eastern Railway shows the most serious decline since 1923 of no less than 25 per cent. ; compared with 1929, the fall has been proportionately largest on the Great Western Railway. Trade conditions in the various sections of the country account for the annual fluctuations, and the recovery since the worst year, namely 1932, has been steadily progressive. The judicious granting of cheap fares, notably the monthly return tickets, has done much to encourage this revival.

Since 1928, the co-ordination of rail services with those of the large bus companies has achieved a considerable degree of stabilisation, and the competition of recent years has been largely that of railway services versus the private car. Legislation has not served to reduce the volume of traffic carried by buses and coaches as may be seen from the statistics given in the Annual Reports of the Traffic Commissioners. The total number of passengers carried by motor vehicles on road services has risen from 5,269 million in 1931 to 6,426 million in 1936.

TABLE 28.

Receipts from Passengers Carried.

	1923		1929		1930		1931		1932	
	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%
L.M.S.	26.0	100	21.8	84	20.4	78	18.8	72	17.8	68
L.N.E.... ..	17.5	100	14.2	81	13.5	77	12.2	70	11.5	65
G.W.R.	10.6	100	9.5	90	9.0	85	8.2	78	7.6	72
S.R.	14.8	100	14.5	98	14.1	96	13.2	90	12.3	83
Total	68.9	100	60.0	87	57.0	83	52.4	76	49.2	71

	1933		1934		1935		1936		1937	
	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%
L.M.S.	17.8	68	18.3	70	18.7	72	19.4	75	20.4	78
L.N.E.... ..	11.5	65	11.8	67	12.1	69	12.6	72	13.1	75
G.W.R.	7.5	71	7.6	72	7.8	74	8.1	77	8.5	80
S.R.	12.3	86	12.9	87	13.4	91	13.9	94	14.7	99
Total	49.4	72	50.6	73	52.0	75	54.0	78	56.7	82

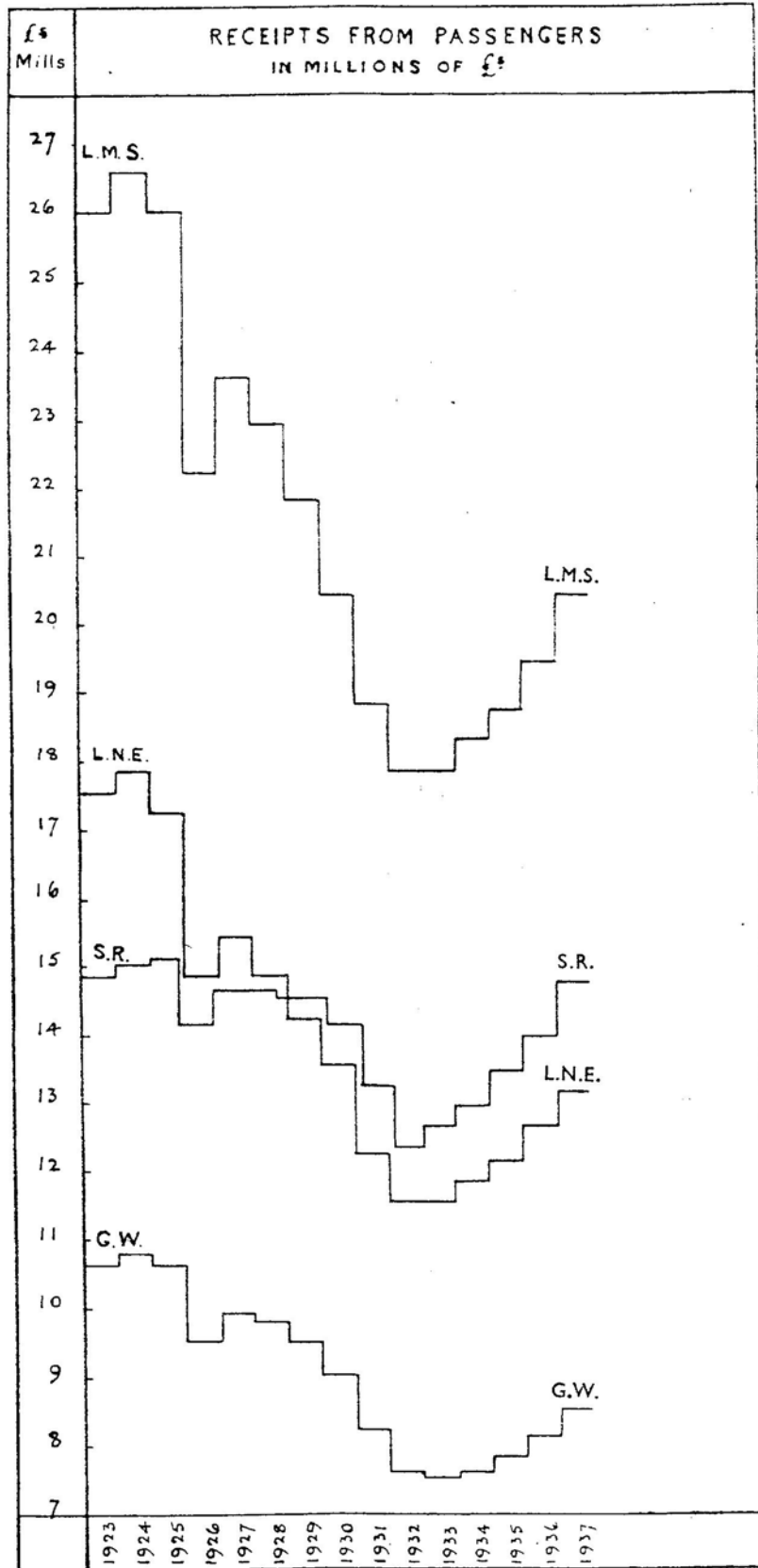
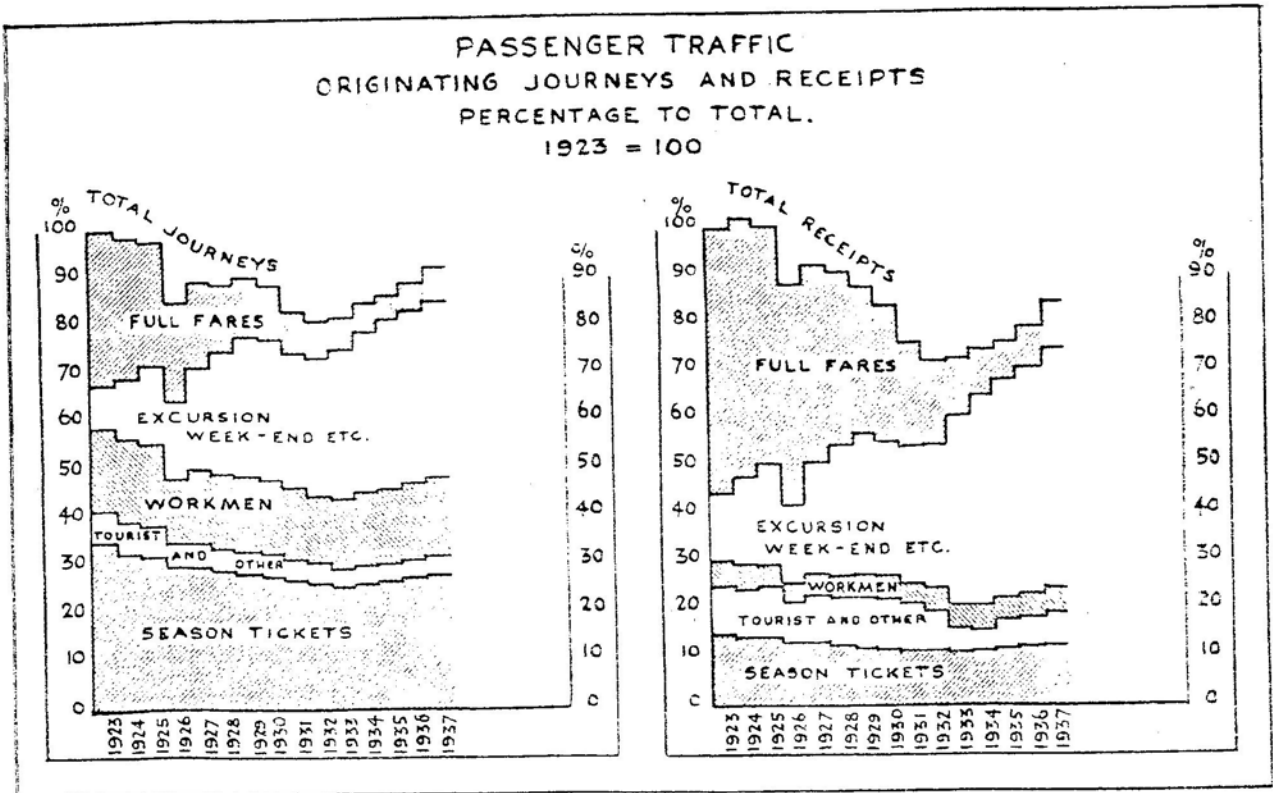


TABLE 29. Originating Passenger Journeys and Receipts—Four Companies.

Description of Ticket :	A—Number of Journeys.									
	1923		1929		1930		1931		1932	
	No. Mill.	%	No. Mill.	%	No. Mill.	%	No. Mill.	%	No. Mill.	%
Full Fare	415	31.5	155	13.0	139	11.9	117	10.7	100	9.4
Excursion, Week-end etc.	123	9.3	377	31.8	379	32.7	373	34.0	383	35.8
Workmen	238	18.0	220	18.5	211	18.1	195	17.8	188	17.5
Tourist	4	0.3	4	0.3	3	0.3	2	0.2	2	0.2
Other	83	6.3	49	4.2	50	4.3	48	4.4	47	4.4
Season Tickets ..	456	34.6	382	32.2	379	32.7	362	32.9	349	32.7
Total	1,319	100.0	1,187	100.0	1,161	100.0	1,097	100.0	1,069	100.0
Description of Ticket :	B—Receipts.									
	1933		1934		1935		1936		1937	
	No. Mill.	%	No. Mill.	%	No. Mill.	%	No. Mill.	%	No. Mill.	%
Full Fare	85	7.9	77	6.9	76	6.6	75	6.4	79	6.5
Excursion, Week-end etc.	420	38.7	445	39.8	464	40.4	472	40.2	487	40.2
Workmen	190	17.5	201	18.0	207	18.0	217	18.5	226	18.6
Tourist	—	—	—	—	—	—	—	—	—	—
Other	45	4.2	45	4.0	46	4.0	46	4.0	47	4.0
Season Tickets ..	344	31.7	351	31.3	356	31.0	363	30.9	371	30.7
Total	1,084	100.0	1,119	100.0	1,149	100.0	1,173	100.0	1,210	100.0
Description of Ticket :	B—Receipts.									
	1923		1929		1930		1931		1932	
	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%
Full Fare	39.4	56.0	21.8	35.3	19.8	33.7	16.0	29.7	12.9	25.4
Excursion, Week-end etc.	9.8	14.0	20.8	33.7	19.8	33.9	20.2	37.4	21.2	41.7
Workmen	3.4	4.8	3.2	5.3	3.2	5.4	3.0	5.5	2.9	5.7
Tourist	3.1	4.4	3.4	5.5	3.0	5.1	2.1	3.8	1.8	3.4
Other	4.4	6.3	3.9	6.3	4.5	7.7	4.5	8.3	4.1	8.1
Season Tickets ..	10.2	14.5	8.6	13.9	8.3	14.2	8.3	15.3	8.0	15.7
Total	70.3	100.0	61.7	100.0	58.6	100.0	54.1	100.0	50.9	100.0
Description of Ticket :	B—Receipts.									
	1933		1934		1935		1936		1937	
	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%
Full Fare	8.8	17.2	6.8	12.9	6.5	12.1	6.7	11.9	7.1	11.9
Excursion, Week-end etc.	27.6	54.0	31.0	59.1	31.7	58.6	33.0	58.6	34.9	58.6
Workmen	3.0	5.9	3.2	6.1	3.3	6.2	3.5	6.3	3.7	6.2
Tourist	0.4	0.8	0.3	0.7	0.4	0.8	0.5	0.9	0.5	0.9
Other	3.5	6.8	3.3	6.2	4.1	7.6	4.4	7.9	4.9	8.3
Season Tickets ..	7.8	15.3	7.9	15.0	8.0	14.7	8.1	14.4	8.4	14.1
Total	51.1	100.0	52.5	100.0	54.0	100.0	56.2	100.0	59.5	100.0



As regards the figures in Table 29, one may stress the continuous fall in the proportion of receipts at full fares, namely from 56 per cent. in 1923 to 35.3 per cent. in 1929 and 11.9 per cent. in 1937. Concerning the number of journeys, this comparative fall of the percentage at full fares has been 31.5, 13.0 and 6.5 respectively. On the other hand, there has been a practically continuous growth, both relatively and absolutely, in traffic, whether measured by numbers or by receipts, classed as "excursion, week-end, etc." This designation includes monthly return tickets which have, in effect, replaced ordinary return tickets, since they have in recent years been issued, subject to a small minimum distance in most areas, between any pair of stations, and have no restrictions as to the trains by which they are available.

The next table, No. 30, shows the average receipt per originating passenger journey, and replaces the table of the same number which appeared in the previous issue, and which gave passenger-mile statistics. With the exception of the year 1934, these statistics have, as an economy measure, not been compiled since 1932. Consequently, it is not possible to give for recent years any precise details as to the average distance travelled or as to the average receipt per passenger-mile. Failing this information, the average receipt per journey is given. It would appear that the average distance travelled has been increasing slightly from the distance of 16.7 miles, at which it stood in 1934; until October, 1937 there was no major change in fares which would raise the average receipt per journey and, in fact, the further extension of reduced fare facilities must have brought down the average receipt per mile even below the rate of 0.67 pence, which was obtained in September, 1934.

TABLE 30. Average Receipt per Passenger Journey (Originating).

	1923	1929	1930	1931	1932
	d.	d.	d.	d.	d.
Full Fares	22.76	33.80	34.21	32.81	30.86
Excursion & Week-end	19.23	13.24	12.57	13.01	13.28
Workmen	3.40	3.54	3.61	3.68	3.74
Tourist	201.13	221.57	230.49	241.85	241.66
Other	12.89	18.99	21.64	22.44	21.19
Season Tickets ..	5.37	5.40	5.26	5.49	5.47
Total	12.80	12.48	12.12	11.84	11.42
	1933	1934	1935	1936	1937
Full Fares	24.82	21.21	20.76	21.44	21.72
Excursion & Week-end	15.77	16.74	16.38	16.77	17.20
Workmen	3.78	3.83	3.86	3.90	3.92
Tourist	273.94	291.45	275.85	272.14	278.39
Other	18.83	17.39	21.45	22.96	25.03
Season Tickets ..	5.45	5.40	5.37	5.35	5.41
Total	11.32	11.27	11.20	11.50	11.80

The effect of the pooling agreements between the various main line railways, and later between them and the London Passenger Transport Board, so far as the London area is concerned, is not visible in these tables, except in so far as the increased availability of tickets and other facilities now available to the passenger has sufficed to retain traffic which might otherwise have been lost.

As between the individual railways, the pooling agreements have naturally tended to preserve the comparative relationships existent at the time chosen as the base years.

Freight Traffic.

The next set of Tables 31—34 inclusive are so comprehensive that it is not necessary to comment upon them extensively, and indeed such a task would be misleading if accomplished with brevity. They obviously reflect the industrial and commercial conditions in the areas served by the individual railways.

Comment may be confined to certain specific points which stand out clearly in these tabular statements.

Concerning Table 31, which relates to the higher-rated traffic, it will be realised that the movement of livestock has been affected in considerable degree by Government regulations resulting from the prevalence of foot and mouth disease. The Great Western Railway results comparing 1937 with 1923 stand out pre-eminently in this table under the heads of receipts, tonnage conveyed and ton-miles, although the average receipt per ton-mile was not the highest of the four railways. As regards tonnage conveyed, the Great Western figure for 1929 was 6 per cent. better than for 1923. Ton-miles on the Great Western in 1937 were 23 per cent. above the 1923 figure and 8 per cent. above the corresponding result for 1929.

Taking the four railways together, and comparing 1937 with 1923, receipts were down by 19 per cent., tonnage by 11 per cent., and receipts per ton-mile by 22 per cent., but ton-mileage, or the actual work done, was up by 6 per cent. The effect of road competition in this category of traffic, where it is most severe through the fact that the road haulier is not really a general carrier of all descriptions of traffic, is witnessed by the reduction in receipts per ton-mile, which gives an indication of the cost which has been incurred by the railways in their efforts to retain this higher-rated traffic.

In Table 32, the London Midland and Scottish Railway takes the lead so far as retention of receipts is concerned, almost achieving in 1937 the results of 1923, but still below the figure for 1929. The London and North Eastern Railway closely follows the London Midland and Scottish Railway, but its results for 1929 were 13 per cent. above corresponding figures for 1923, and this increase has been entirely lost in the succeeding years. The London and North Eastern Railway achieves the lead so far as concerns tonnage conveyed and ton-mileage, the former having re-attained the 1923 results and the latter showing an increase of 24 per cent., followed by the Great Western Railway with 17 per cent., both results well in excess of the figures for 1929. On a receipts per ton-mile basis, the London Midland and Scottish Railway appeared to have been much more successful than the other railways, almost attaining the 1923 results which were, however, not so good as those for 1929. The Southern Railway, under receipts per ton-mile shows the serious fall of 33 per cent.

Taking the railways as a whole, and comparing with 1923, ton-mileage is up by 11 per cent., but receipts, tonnage and receipts per ton-mile are all lower. In judging the results, it should be borne in mind that there may be wide variations in the proportions of the various classes of traffic within the main categories of merchandise, other than classes 1—6, and merchandise and minerals, classes 1—6, hence the results are to this extent virtually outside the control of the railways concerned.

Table 33 dealing with coal and coke traffic is, to a considerable extent, affected by the export and bunkering trade, especially in the case of the Great Western and the London and North Eastern Railways. Of recent years, this trade has been seriously affected by political considerations, and again such events are outside the power of railway companies to control.

The Great Western has suffered more seriously than the other railways so far as coal and coke traffic is concerned when 1937 results are compared with those of 1923, and, with the exception of the Southern Railway, whose figures were aided by the development of the Kent coalfield, the results for 1929 were considerably below those of 1923. This leeway has not been made up during the last nine years, although 1937 results were a great improvement on the figures for 1933, when the lowest point was touched.

Even ton-mileage, which has risen considerably in the case of merchandise traffic, has shown no resilience so far as coal and coke traffic is concerned, in part due to the strong coastal competition, especially between north-east coast ports and the London area, bulk cargoes being carried by water to points on the Thames above London, in fact London coal is becoming increasingly seaborne, as the figures shown in the second part of Table 35 clearly indicate. Indeed, Table 33 should be read in conjunction with the data given in Table 35, the latter showing the disastrous decline in the production and export of coal and coke, with which is included bunkers: expressed briefly compared with 1923, export and bunker tonnage has decreased by 48 million tons, a loss offset to the extent of 14 million tons by increased home consumption.

Commenting on Table 34, which summarises the contents of the three preceding tables, one may point out that in 1937, total freight traffic receipts were 14 per cent. below 1923, and 10 per cent. below 1929; tonnage conveyed was 13 per cent. below 1923, and 9 per cent. below 1929; ton-mileage, however, was but 3 per cent. lower than 1923, and only 2.6 per cent. less than 1929; but the average receipt per ton-mile showed an 11 per cent. decrease on 1923, and a 9 per cent. decrease on 1929.

The problem is then one of the level of receipts rather than the volume of traffic as measured by ton-mileage; the existence of competition with other means of transport whose charges and labour conditions were, compared with the position on the railways, uncontrolled in 1937 has had a serious effect upon the financial position of the country's railway system, which, from its commencement, has undertaken the full duties of a common carrier. Table 36 combines the receipts for passenger trains and freight trains.

TABLE 31. Merchandise (Excluding Classes 1—6) and Livestock Traffic Receipts.

	Receipts.									
	1923		1929		1930		1931		1932	
	£	%	£	%	£	%	£	%	£	%
L.M.S. ..	24.9	100	22.8	92	20.9	84	19.2	77	17.1	69
L.N.E. ..	16.4	100	16.2	98	14.9	91	13.5	82	11.6	71
G.W.R. ..	8.3	100	8.6	104	8.4	101	7.7	93	6.9	83
S.R. ..	3.6	100	3.2	88	3.1	86	3.0	81	2.6	72
Total ..	53.2	100	50.8	95	47.3	89	43.4	81	38.2	72
	1933									
	£	%	£	%	£	%	£	%	£	%
L.M.S. ..	17.1	69	17.9	72	18.1	73	19.0	76	19.4	78
L.N.E. ..	11.4	70	11.9	72	12.0	73	12.6	76	13.0	79
G.W.R. ..	6.8	82	7.1	86	7.3	88	7.7	94	7.9	95
S.R. ..	2.5	69	2.6	71	2.5	68	2.6	72	2.7	74
Total ..	37.8	71	39.5	74	39.9	75	41.9	79	43.0	81

	Tonnage Conveyed.									
	1923		1929		1930		1931		1932	
	Tons.	%	Tons.	%	Tons.	%	Tons.	%	Tons.	%
L.M.S. ..	33.3	100	33.3	100	31.0	93	27.7	83	25.1	75
L.N.E. ..	28.0	100	27.8	99	25.3	91	22.4	80	19.7	70
G.W.R. ..	13.7	100	14.5	106	14.0	102	12.9	94	11.7	85
S.R. ..	5.8	100	5.6	98	5.6	96	5.3	93	4.8	83
Total ..	80.8	100	81.2	101	75.9	94	68.3	85	61.3	76
	1933									
	Tons. <th>%</th> <th>Tons.</th> <th>%</th> <th>Tons.</th> <th>%</th> <th>Tons.</th> <th>%</th> <th>Tons.</th> <th>%</th>	%	Tons.	%	Tons.	%	Tons.	%	Tons.	%
L.M.S. ..	25.5	76	27.3	82	27.5	83	29.5	89	30.5	92
L.N.E. ..	19.5	70	20.7	74	20.7	74	22.2	79	23.0	82
G.W.R. ..	11.7	85	12.4	91	12.5	92	13.1	96	13.6	99
S.R. ..	4.7	82	4.9	85	4.8	83	4.9	86	5.1	89
Total ..	61.4	76	65.3	81	65.5	81	69.7	86	72.2	89

TABLE 31. Merchandise (Excluding Classes 1—6) and Livestock Traffic Receipts—Continued

	Ton-Miles.									
	1923		1929		1930		1931		1932	
	Miles Mill.	%	Miles Mill.	%	Miles Mill.	%	Miles Mill.	%	Miles Mill.	%
L.M.S. ..	2,129.4	100	2,341.1	110	2,192.1	103	1,989.1	93	1,845.2	87
L.N.E. ..	1,751.2	100	1,813.8	104	1,680.6	96	1,532.3	88	1,340.6	77
G.W.R. ..	844.6	100	960.7	114	954.1	113	907.3	107	829.9	98
S.R. ..	289.1	100	273.8	95	271.8	94	264.9	92	235.6	82
Total ..	5,014.2	100	5,389.3	107	5,098.6	102	4,693.7	94	4,251.4	85
	Ton-Miles.									
	1933		1934		1935		1936		1937	
	Miles. Mill.	%	Miles. Mill.	%	Miles. Mill.	%	Miles. Mill.	%	Miles. Mill.	%
L.M.S. ..	1,895.9	89	2,053.7	96	2,096.5	98	2,286.3	107	2,336.1	110
L.N.E. ..	1,367.0	78	1,456.9	83	1,474.1	84	1,610.2	92	1,668.8	95
G.W.R. ...	846.0	100	904.7	107	939.9	111	1,005.8	119	1,037.6	123
S.R. ..	230.0	80	235.9	82	231.1	80	245.3	85	265.9	92
Total ..	4,338.9	86	4,651.2	93	4,741.6	95	5,147.6	103	5,308.4	106
	Receipts per Ton-Mile.									
	1923		1929		1930		1931		1932	
	d.	%	d.	%	d.	%	d.	%	d.	%
L.M.S. ..	2.712	100	2.337	86	2.290	84	2.319	86	2.229	82
L.N.E. ..	2.245	100	2.138	95	2.124	95	2.102	94	2.082	93
G.W.R. ..	2.297	100	2.160	94	2.098	91	2.041	89	1.979	86
S.R. ..	3.037	100	2.814	93	2.770	91	2.690	89	2.666	88
Total ..	2.498	100	2.263	91	2.251	90	2.215	89	2.158	86
	Receipts per Ton-Mile.									
	1933		1934		1935		1936		1937	
	d.	%	d.	%	d.	%	d.	%	d.	%
L.M.S. ..	2.162	80	2.090	77	2.071	76	1.995	74	1.994	74
L.N.E. ..	2.012	90	1.960	87	1.954	87	1.871	83	1.868	83
G.W.R. ..	1.928	84	1.880	82	1.860	81	1.848	80	1.820	79
S.R. ..	2.628	87	2.643	87	2.592	85	2.571	85	2.428	80
Total ..	2.094	84	2.037	82	2.018	81	1.955	78	1.943	78

NOTE.—The percentages have been calculated on the actual amounts and not on the approximate values shown above.

TABLE 32.

Minerals and Merchandise Traffic (Classes 1—6.)

	Receipts.									
	1923		1929		1930		1931		1932	
	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%	£ Mill.	%
L.M.S. ..	6.6	100	6.8	104	6.1	93	5.2	79	4.4	68
L.N.E. ..	5.1	100	5.7	113	5.2	104	4.2	84	3.5	69
G.W.R. ..	2.8	100	2.9	101	2.4	87	2.1	76	1.7	62
S.R. ..	0.8	100	0.8	101	0.9	103	0.8	94	0.7	79
Total ..	15.3	100	16.2	106	14.6	96	12.3	81	10.3	67
	1933		1934		1935		1936		1937	
	£	%	£	%	£	%	£	%	£	%
	Mill.	%	Mill.	%	Mill.	%	Mill.	%	Mill.	%
L.M.S. ..	4.6	71	5.3	81	5.5	84	6.1	92	6.5	99
L.N.E. ..	4.0	78	4.6	91	4.5	89	4.7	93	4.9	97
G.W.R. ..	2.0	70	2.2	79	2.2	79	2.3	83	2.6	91
S.R. ..	0.7	81	0.7	91	0.7	84	0.6	81	0.6	74
Total ..	11.3	74	12.8	84	12.9	85	13.7	90	14.6	96
	Tonnage Conveyed.									
	1923		1929		1930		1931		1932	
	Tons.	%	Tons.	%	Tons.	%	Tons.	%	Tons.	%
L.M.S. ..	33.2	100	32.6	98	29.5	89	23.9	72	20.7	62
L.N.E. ..	27.0	100	29.9	111	26.8	99	21.3	79	17.8	66
G.W.R. ..	12.7	100	13.0	102	11.1	88	9.6	75	8.5	67
S.R. ..	3.7	100	3.9	104	3.9	104	3.8	101	3.2	85
Total ..	76.6	100	79.4	104	71.3	93	58.6	77	50.2	65
	1933		1934		1935		1936		1937	
	Tons.	%	Tons.	%	Tons.	%	Tons.	%	Tons.	%
	Mill.	%	Mill.	%	Mill.	%	Mill.	%	Mill.	%
L.M.S. ..	21.7	66	25.9	78	26.2	79	28.9	87	30.7	93
L.N.E. ..	19.8	73	23.8	88	23.8	88	25.7	95	26.9	93
G.W.R. ..	9.0	70	10.0	79	10.1	79	10.9	86	12.1	77
S.R. ..	3.5	93	3.8	100	3.5	94	3.4	91	3.9	77
Total ..	54.0	70	63.5	83	63.6	83	68.9	90	72.7	85

TABLE 32. Minerals and Merchandise Traffic Classes (1-6)—Continued.

	Ton-Miles.									
	1923		1929		1930		1931		1932	
	Miles Mill.	%	Miles Mill.	%	Miles Mill.	%	Miles Mill.	%	Miles Mill.	%
L.M.S. ..	1,595.9	100	1,596.2	100	1,468.1	92	1,251.1	78	1,109.6	70
L.N.E. ..	970.8	100	1,182.4	122	1,130.5	116	928.6	96	761.3	78
G.W.R. ..	558.5	100	590.2	106	511.9	92	442.5	79	396.1	71
S.R. ..	131.3	100	152.5	116	158.2	121	150.2	114	137.5	105
Total ..	3,256.6	100	3,521.3	108	3,268.7	100	2,772.3	85	2,404.6	74
	1933		1934		1935		1936		1937	
	Miles Mill.	%	Miles Mill.	%	Miles Mill.	%	Miles Mill.	%	Miles Mill.	%
	L.M.S. ..	1,153.2	70	1,322.8	83	1,364.0	85	1,501.3	94	1,608.0
L.N.E. ..	893.7	92	1,067.3	110	1,055.0	109	1,150.5	119	1,212.1	125
G.W.R. ..	459.6	82	533.6	96	538.3	96	583.3	104	656.0	117
S.R. ..	142.4	108	163.1	124	161.9	123	150.8	115	144.5	110
Total ..	2,648.9	81	3,086.8	95	3,119.2	96	3,385.9	104	3,620.6	111
	Receipts per Ton-Mile.									
	1923		1929		1930		1931		1932	
	d.	%	d.	%	d.	%	d.	%	d.	%
L.M.S. ..	0.995	100	1.027	103	0.995	100	0.994	100	0.960	96
L.N.E. ..	1.250	100	1.155	92	1.115	89	1.099	88	1.091	87
G.W.R. ..	1.206	100	1.150	95	1.444	95	1.153	96	1.052	87
S.R. ..	1.511	100	1.311	87	1.297	86	1.241	82	1.140	75
Total ..	1.128	100	1.103	98	1.075	95	1.068	95	1.027	91
	1933		1934		1935		1936		1937	
	d.	%	d.	%	d.	%	d.	%	d.	%
	L.M.S. ..	0.971	98	0.963	97	0.967	97	0.970	97	0.973
L.N.E. ..	1.060	85	1.029	82	1.023	82	0.975	78	0.972	78
G.W.R. ..	1.032	86	0.999	83	0.994	82	0.961	80	0.938	78
S.R. ..	1.121	74	1.106	73	1.027	68	1.061	70	1.012	67
Total ..	1.020	90	1.000	89	0.994	88	0.974	86	0.968	86

NOTE.—The percentages have been calculated on the actual amounts and not on the approximate values shown above.

TABLE 33.

Coal, Coke and Patent Fuel.

Receipts.

	1923		1929		1930		1931		1932	
	£	%	£	%	£	%	£	%	£	%
L.M.S. ..	15.5	100	14.2	91	13.4	86	12.8	82	12.2	78
L.N.E. ..	14.5	100	14.1	97	13.4	92	12.2	84	11.4	78
G.W.R. ..	7.2	100	6.5	90	6.2	86	5.5	76	5.2	72
S.R.	1.7	100	1.7	103	1.6	96	1.6	100	1.6	100
Total ..	38.9	100	36.5	94	34.6	89	32.1	83	30.4	78

	1933		1934		1935		1936		1937	
	£	%	£	%	£	%	£	%	£	%
L.M.S. ..	11.6	75	12.0	78	12.3	79	12.8	82	13.7	88
L.N.E. ..	11.1	77	11.9	82	11.8	81	12.3	85	13.2	90
G.W.R. ..	5.1	71	5.2	72	5.3	73	5.4	74	5.9	82
S.R.	1.6	95	1.6	98	1.6	97	1.6	99	1.6	99
Total ..	29.4	76	30.7	79	31.0	80	32.1	82	34.4	88

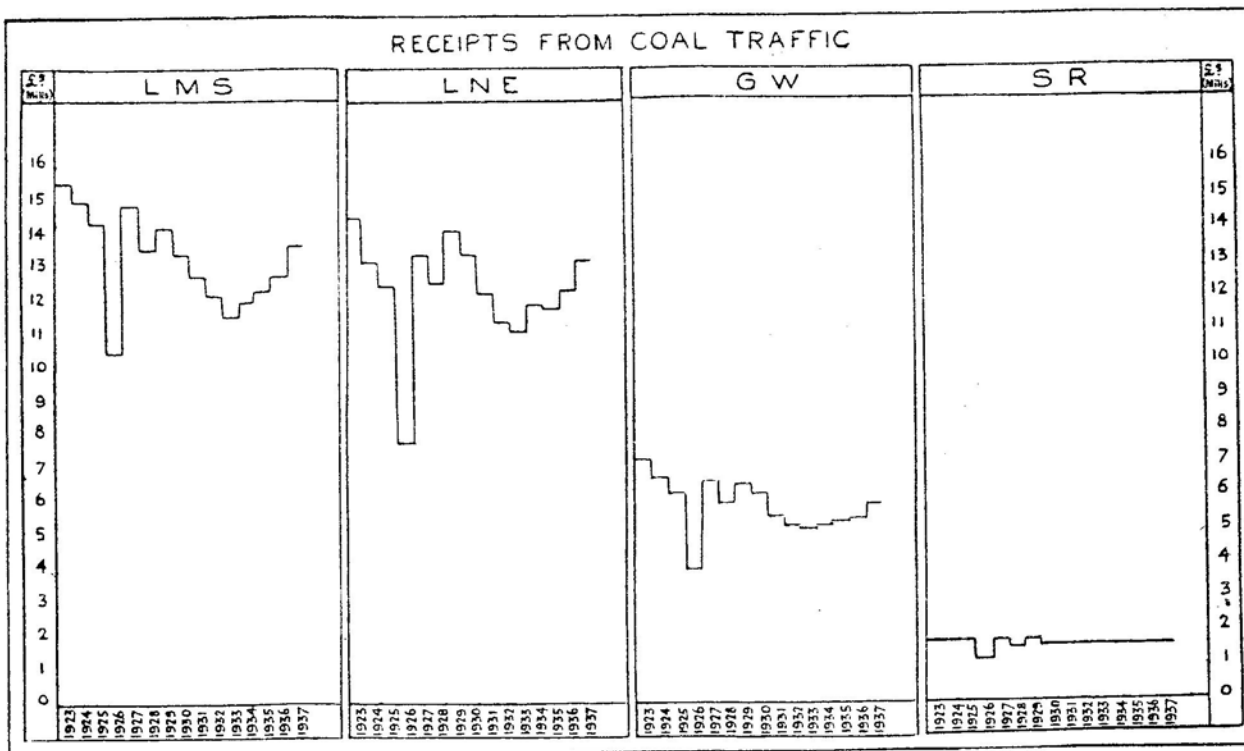


TABLE 33.

Coal, Coke and Patent Fuel—Continued.

		Tonnage Conveyed.									
		1923		1929		1930		1931		1932	
		Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
		Mill.		Mill.		Mill.		Mill.		Mill.	
L.M.S.	..	97.4	100	84.7	87	80.4	83	75.0	77	72.0	74
L.N.E.	..	98.5	100	94.4	96	87.6	89	78.5	80	75.3	76
G.W.R.	..	57.8	100	54.8	95	50.5	87	43.3	75	41.7	72
S.R.	..	8.4	100	8.4	99	8.0	96	8.3	99	8.2	98
Total	..	262.1	100	242.3	92	226.5	86	205.1	78	197.2	75
		1933		1934		1935		1936		1937	
		Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
		Mill.		Mill.		Mill.		Mill.		Mill.	
L.M.S.	..	69.6	71	72.2	74	73.1	75	75.0	77	78.8	81
L.N.E.	..	75.4	77	80.4	82	79.8	81	82.8	84	86.6	88
G.W.R.	..	41.2	71	42.5	74	42.5	73	41.4	72	46.4	80
S.R.	..	8.1	97	8.3	99	8.4	100	8.6	102	8.4	101
Total	..	194.3	74	203.4	78	203.8	79	207.8	79	220.2	84
		Ton-Miles.									
		1923		1929		1930		1931		1932	
		Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
		Mill.		Mill.		Mill.		Mill.		Mill.	
L.M.S.	..	3,652.3	100	3,235.1	89	3,062.8	84	2,961.2	81	2,776.5	76
L.N.E.	..	3,439.8	100	3,167.9	92	2,976.9	87	2,776.2	81	2,564.1	75
G.W.R.	..	1,817.8	100	1,704.6	94	1,578.9	87	1,389.9	76	1,330.9	73
S.R.	..	289.2	100	303.0	105	293.5	101	302.9	105	304.7	105
Total	..	9,199.1	100	8,410.6	91	7,912.1	86	7,430.2	81	6,976.1	76
		1933		1934		1935		1936		1937	
		Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
		Mill.		Mill.		Mill.		Mill.		Mill.	
L.M.S.	..	2,654.2	73	2,783.3	76	2,849.7	78	2,985.0	82	3,136.3	86
L.N.E.	..	2,492.9	72	2,676.5	78	2,646.8	77	2,776.5	81	2,966.2	86
G.W.R.	..	1,308.6	72	1,352.1	74	1,374.1	76	1,414.9	78	1,547.9	85
S.R.	..	297.5	103	302.4	105	301.4	104	297.8	103	296.6	103
Total	..	6,753.0	73	7,114.3	77	7,172.0	78	7,474.2	81	7,947.0	86

TABLE 33.

Coal, Coke and Patent Fuel—Continued.

	Receipts per Ton-Mile.									
	1923		1929		1930		1931		1932	
	d.	%	d.	%	d.	%	d.	%	d.	%
L.M.S. ..	1.023	100	1.053	103	1.047	102	1.038	101	1.051	103
L.N.E. ..	1.027	100	1.071	104	1.085	106	1.055	103	1.066	104
G.W.R. ..	0.952	100	0.916	96	0.942	99	0.945	99	0.938	99
S.R. ..	1.347	100	1.346	99	1.295	96	1.306	97	1.289	96
Total ..	1.021	100	1.042	102	1.050	103	1.038	102	1.045	102
	1933		1934		1935		1936		1937	
	d.	%	d.	%	d.	%	d.	%	d.	%
L.M.S. ..	1.049	103	1.038	101	1.038	101	1.028	100	1.045	102
L.N.E. ..	1.072	104	1.067	104	1.072	104	1.064	104	1.066	104
G.W.R. ..	0.938	99	0.922	97	0.922	97	0.906	95	0.918	96
S.R. ..	1.266	94	1.284	95	1.270	94	1.309	97	1.320	98
Total ..	1.046	102	1.037	102	1.038	102	1.029	101	1.038	102

NOTE.—The percentages have been calculated on the actual amounts and not on the approximate values shown above.

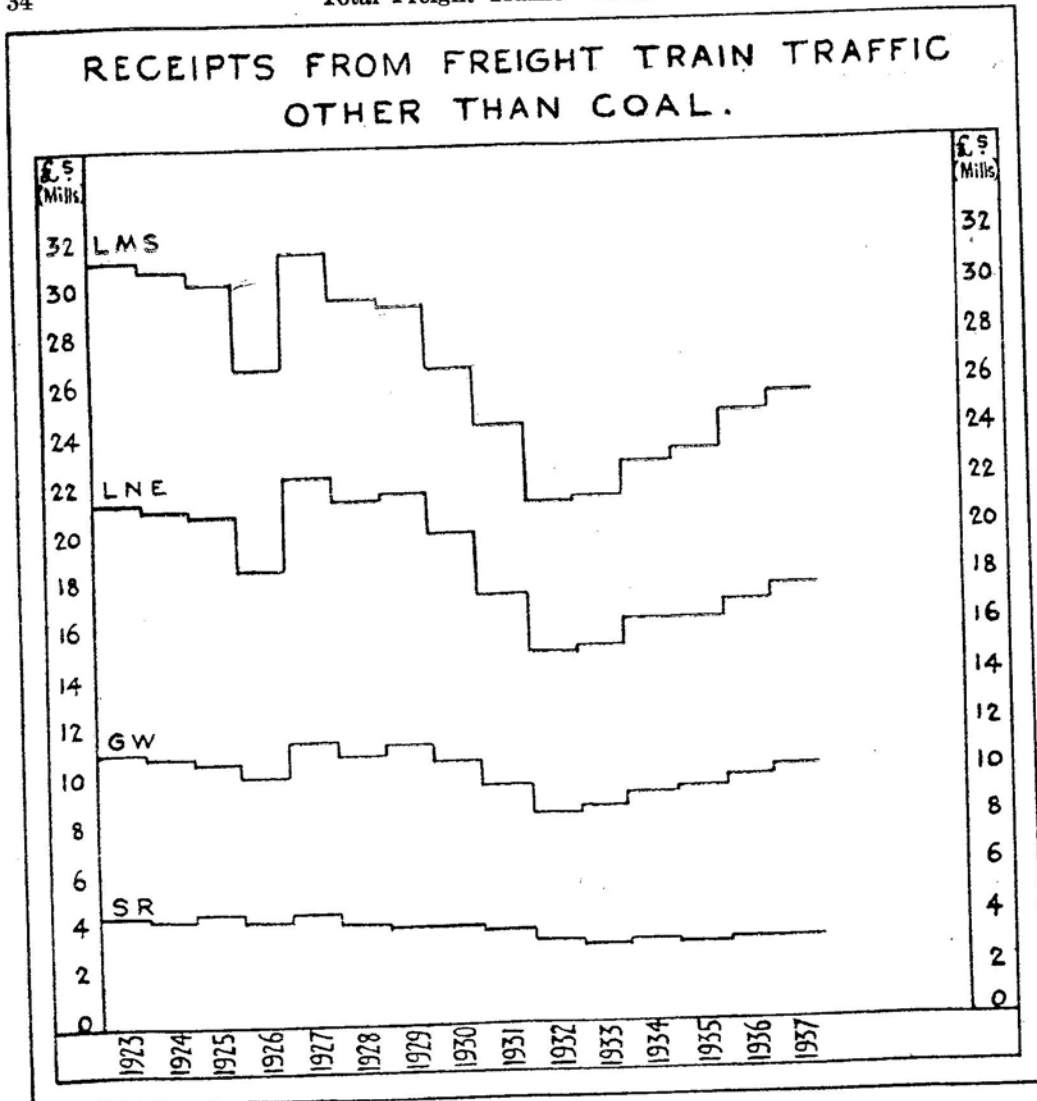
TABLE 34.

Total Freight Traffic.

	Receipts.									
	1923		1929		1930		1931		1932	
	£	%	£	%	£	%	£	%	£	%
L.M.S. ..	47.0	100	43.8	93	40.4	86	37.2	79	33.7	72
L.N.E. ..	36.0	100	36.0	100	33.5	93	29.9	83	26.5	74
G.W.R. ..	18.3	100	18.0	98	17.0	93	15.3	84	13.8	75
S.R. ..	6.1	100	5.7	94	5.6	91	5.4	88	4.9	80
Total ..	107.4	100	103.5	96	96.5	90	87.8	82	78.9	73
	1933		1934		1935		1936		1937	
	£ <th>%</th> <th>£</th> <th>%</th> <th>£</th> <th>%</th> <th>£</th> <th>%</th> <th>£</th> <th>%</th>	%	£	%	£	%	£	%	£	%
L.M.S. ..	33.3	71	35.2	75	35.9	76	37.9	81	39.6	84
L.N.E. ..	26.5	74	28.4	79	28.3	79	29.5	82	31.1	86
G.W.R. ..	13.9	76	14.5	79	14.8	81	15.4	84	16.4	80
S.R. ..	4.8	78	4.9	81	4.8	78	4.9	81	4.9	81
Total ..	78.5	73	83.0	77	83.8	78	87.7	82	92.0	86

Total Freight Traffic—Continued.

TABLE 34



	Tonnage Conveyed.									
	1923		1929		1930		1931		1932	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
	Mill.		Mill.		Mill.		Mill.		Mill.	
L.M.S. ..	163.9	100	150.6	92	140.9	86	126.6	77	117.8	72
L.N.E. ..	153.5	100	152.1	99	139.7	91	122.2	80	112.8	74
G.W.R. ..	84.2	100	82.3	98	75.6	90	65.8	78	61.9	73
S.R. ..	17.9	100	17.9	100	17.5	98	17.4	97	16.2	90
Total ..	419.5	100	402.9	96	373.7	89	332.0	79	308.7	74
	1933		1934		1935		1936		1937	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
	Mill.		Mill.		Mill.		Mill.		Mill.	
L.M.S. ..	116.8	71	125.4	76	126.8	77	133.4	81	140.0	85
L.N.E. ..	114.7	75	124.9	81	124.3	81	130.6	85	136.5	89
G.W.R. ..	61.9	73	64.9	77	65.1	77	65.5	78	72.1	86
S.R. ..	16.3	91	17.0	95	16.7	93	16.9	95	16.5	92
Total ..	309.7	74	332.2	79	332.9	79	346.4	83	365.1	87

TABLE 34.

Total Freight Traffic—Continued.

	Ton-Miles.									
	1923		1929		1930		1931		1932	
	Miles.		Miles.		Miles.		Miles		Miles.	
	Mill.	%	Mill.	%	Mill.	%	Mill.	%	Mill.	%
L.M.S. ..	7,377.6	100	7,172.3	97	6,723.0	91	6,201.4	84	5,731.4	78
L.N.E. ..	6,161.8	100	6,164.1	100	5,788.0	94	5,237.2	85	4,666.0	76
G.W.R. ..	3,220.9	100	3,255.5	101	3,044.9	95	2,739.7	85	2,556.9	79
S.R. ..	709.5	100	729.3	103	723.6	102	718.0	101	677.8	96
Total ..	17,469.8	100	17,321.2	99	16,279.5	93	14,896.3	85	13,632.1	78
	1933		1934		1935		1936		1937	
	Miles		Miles		Miles		Miles		Miles	
	Mill.	%	Mill.	%	Mill.	%	Mill.	%	Mill.	%
L.M.S. ..	5,703.2	77	6,159.8	84	6,310.2	86	6,772.6	92	7,080.4	96
L.N.E. ..	4,753.6	77	5,200.7	84	5,175.9	84	5,537.2	90	5,847.1	95
G.W.R. ..	2,614.1	81	2,790.4	87	2,852.3	89	3,004.0	93	3,241.5	101
S.R. ..	669.9	94	701.4	99	694.4	98	693.9	98	707.0	100
Total ..	13,740.9	79	14,852.3	85	15,032.8	86	16,007.7	92	16,876.0	97
Receipts per Ton-Mile.										
	1923		1929		1930		1931		1932	
	d.	%	d.	%	d.	%	d.	%	d.	%
L.M.S. ..	1.504	100	1.466	97	1.441	96	1.440	96	1.413	94
L.N.E. ..	1.408	100	1.401	100	1.393	99	1.369	97	1.362	97
G.W.R. ..	1.349	100	1.325	98	1.338	99	1.341	99	1.293	96
S.R. ..	2.066	100	1.890	91	1.849	89	1.803	87	1.737	84
Total ..	1.464	100	1.434	98	1.423	97	1.415	97	1.389	95
	1933		1934		1935		1936		1937	
	d.	%	d.	%	d.	%	d.	%	d.	%
L.M.S. ..	1.403	93	1.373	91	1.366	91	1.341	89	1.341	89
L.N.E. ..	1.340	95	1.310	93	1.313	93	1.280	91	1.275	91
G.W.R. ..	1.275	95	1.247	92	1.245	92	1.232	91	1.211	90
S.R. ..	1.703	82	1.700	82	1.653	80	1.701	82	1.674	81
Total ..	1.372	94	1.343	92	1.338	91	1.315	90	1.307	89

NOTE.—The percentages have been calculated on the actual amounts and not on the approximate values shown above.

TABLE 35.

A.—Coal Output and Consumption in Great Britain.

	Total Coal Output		Home Consumption	Coal & Coke Export and Bunkers
	Tons			
	Mill.	%	Mill.	Mill.
1923.. ..	276	100	169	104
1924.. ..	267	97	180	84
1925.. ..	243	88	170	72
1926.. ..	126	46	*	*
1927.. ..	251	91	180	72
1928.. ..	237	86	164	72
1929.. ..	258	93	174	82
1930.. ..	244	88	166	75
1931.. ..	219	80	156	62
1932.. ..	209	76	150	57
1933.. ..	207	75	148	57
1934.. ..	221	80	161	57
1935.. ..	222	80	164	55
1936.. ..	228	83	176	50
1937.. ..	241	87	183	56

* Comparable figures not available.

B.—Tonnage of Coal and Coke Brought to London.

	1923	1936	1937
By Rail	9,855,800	6,760,000	7,061,000
By Sea	7,190,000	14,738,000	15,213,000
By Canal	35,900	51,000	53,000
Total	17,081,700	21,549,000	22,327,000

TABLE 36.

Total Railway Receipts (Freight and Passenger Traffic).

	1923		1929		1930		1931		1932	
	£	%	£	%	£	%	£	%	£	%
	Mill.	%	Mill.	%	Mill.	%	Mill.	%	Mill.	%
L.M.S. ..	80.7	100	73.2	91	68.2	85	63.2	78	58.5	73
L.N.E. ..	58.8	100	55.6	95	52.4	89	47.2	81	42.7	73
G.W.R. ..	32.4	100	31.0	96	29.6	91	26.9	83	24.5	76
S.R. ..	23.7	100	23.0	97	22.4	94	21.2	89	19.7	83
Total ..	195.6	100	182.8	93	172.6	88	158.5	81	145.4	74
	1933		1934		1935		1936		1937	
	£	%	£	%	£	%	£	%	£	%
	Mill.	%	Mill.	%	Mill.	%	Mill.	%	Mill.	%
L.M.S. ..	58.2	72	60.6	75	61.7	76	64.5	80	67.2	83
L.N.E. ..	42.7	73	44.9	76	45.1	77	46.9	80	49.1	84
G.W.R. ..	24.6	76	25.3	78	25.7	79	26.7	82	28.1	87
S.R. ..	19.8	84	20.3	86	20.7	87	21.2	90	22.1	93
Total ..	145.3	74	151.1	77	153.2	78	159.3	81	166.5	85

NOTE.—The percentages have been calculated on the actual amounts and not on the approximate values shown above.

II. RAILWAY EXPENDITURE.

The data in Table 37 bear witness to the success which has been attained in reducing expenditure to meet the fall in railway traffic receipts, and may be contrasted with figures contained in Table 36.

There is very little variation, comparing 1923 and 1937, between the three railways relying almost entirely on steam traction, the decrease being 16 to 17 per cent.; the reduction of only 10 per cent. in the case of the Southern Railway should be related to the fall of only 7 per cent. in total railway receipts attained by that company over this 15-year period.

A somewhat different picture is shown by an analysis of the third section (C) of Table 37 demonstrating clearly the reduced cost per train-mile of electric traction, thereby permitting the increased frequency without increased total operating cost, but on the other hand these train-mile figures make no allowance for the remuneration of capital expended to provide for the changeover in type of traction.

The increased charges for fuel and for electric power which were an important characteristic of the working in 1937, as well as somewhat increased labour charges, are reflected in the rise for that year when compared with 1936; it will be noted that for each railway the fall in the expenditure per train-mile amounts to about two shillings in the case of the three largest railways, and almost three shillings in the case of the Southern Railway, when comparing 1937 with 1923.

The different situation now existing on the Southern Railway as compared with the other lines is also exemplified in Table 37 (B), dealing with train-mileage, since the Southern Railway shows an increase of 43 per cent. on 1923, whereas the increase on the other three lines ranges from 9 to 11 per cent.

The figure for the four railways together of an increase of 14 per cent. provides some measure of the added facilities now enjoyed by the travelling public and the trader, and it is worthy of note that by 1929 an increase of 7 per cent. had been achieved, but in 1932, owing to reduced demands, train-mileage was within 1 per cent. of 1932, in spite of a 26 per cent. increase on the Southern Railway. Since then the increase has been continuous.

Any study of the trend exemplified in Table 37 should take into consideration the varying deductions from salaries and wages which were in effect from 1928 to 1930 and 1931 to 1937.

Table 38, though applicable to only one railway, may be regarded as typical of a trend which has affected all of the railways; whereas tonnage has dropped materially, the number of consignments has greatly increased, but increased efficiency has enabled the costs, as measured by wages and hours of staff engaged, to be reduced far in excess of the percentage reduction in tonnage.

A large item of expenditure which is too often forgotten and which it has not been possible to compress below the 1923 figure is that relating to superannuation and pension funds. This problem, which has had to be faced by many industries, is not unique to British railways, but has provided a difficulty of considerable magnitude to railways in other countries, as, for instance, the United States and Canada, but it has been most acute in the case of certain Continental European railways, where in a few instances the pensions allocations have closely approximated to the total payments for labour actually in employment.

In the case of the four British railways, it will be seen that superannuation and pension funds allocations have far more than offset the savings under other heads in the account covering general charges.

TABLE 37.

Railway Expenditure and Train-Mileage.

A—Expenditure.

	1923		1929		1930		1931		1932	
	£		£		£		£		£	
	Mill.	%	Mill.	%	Mill.	%	Mill.	%	Mill.	%
L.M.S. ..	64.3	100	57.2	89	55.7	87	50.7	79	48.3	75
L.N.E. ..	47.4	100	43.3	91	41.9	88	37.7	80	35.0	74
G.W.R. ..	26.0	100	23.9	92	23.4	90	21.6	83	20.3	78
S.R. ..	19.2	100	18.1	95	17.9	94	17.0	89	15.7	82
Total ..	156.9	100	142.5	91	138.9	89	127.0	81	119.3	76

	1933		1934		1935		1936		1937	
	£		£		£		£		£	
	Mill.	%	Mill.	%	Mill.	%	Mill.	%	Mill.	%
L.M.S. ..	47.3	74	48.7	76	49.5	77	51.2	80	53.6	83
L.N.E. ..	34.6	73	36.2	77	36.5	77	38.1	81	39.6	84
G.W.R. ..	19.9	76	20.1	77	20.5	79	20.8	80	21.8	84
S.R. ..	15.5	81	15.8	82	16.0	84	16.5	86	17.2	90
Total ..	117.3	75	120.8	77	122.5	78	126.6	81	132.2	84

B—Train-Miles.

	1923		1929		1930		1931		1932	
	Miles		Miles		Miles		Miles		Miles	
	Mill.	%	Mill.	%	Mill.	%	Mill.	%	Mill.	%
L.M.S. ..	146.7	100	152.5	104	149.6	102	144.7	99	142.1	97
L.N.E. ..	104.5	100	112.0	107	110.3	106	105.2	101	102.2	98
G.W.R. ..	62.9	100	65.4	104	56.0	103	62.4	100	61.4	98
S.R. ..	48.9	100	59.4	121	61.2	125	61.9	125	61.6	126
Total ..	363.0	100	389.3	107	386.1	106	374.2	103	367.3	101

	1933		1934		1935		1936		1937	
	Miles		Miles		Miles		Miles		Miles	
	Mill.	%	Mill.	%	Mill.	%	Mill.	%	Mill.	%
L.M.S. ..	143.6	98	150.5	103	153.4	105	158.0	108	161.2	110
L.N.E. ..	103.2	99	108.0	103	109.5	105	113.0	108	116.1	111
G.W.R. ..	61.5	98	63.4	101	64.8	103	67.3	107	68.3	109
S.R. ..	64.7	132	65.6	134	66.8	137	68.3	140	70.0	143
Total ..	373.0	103	387.5	107	394.5	109	406.6	112	415.6	114

TABLE 37A. Figures Before Correction for Revised Basis of Local Rates Payments.

	1931		1932		1933		1934		1935	
	Mill.	%	Mill.	%	Mill.	%	Mill.	%	Mill.	%
L.M.S.	51.4	80	49.2	76	48.3	75	49.6	77	49.5	77
L.N.E.	38.2	81	35.7	75	35.2	74	36.9	78	37.1	78
G.W.R.	21.8	84	20.5	79	20.1	77	20.3	78	20.8	80
S.R.	17.2	90	16.0	84	15.8	82	16.1	84	16.1	84
Total	128.6	82	121.4	77	119.4	76	122.9	78	123.5	79

Structure and Train-Mileage—Continued.

Expenditure per Train-Mile.	1929		1930		1931		1932	
	%	s. d.	%	s. d.	%	s. d.	%	s. d.
	86	7 5	85	7 0	80	6 10	78	6 10
	85	7 7	84	7 2	79	6 10	75	6 10
	88	7 3	87	6 11	84	6 7	80	6 7
	78	5 10	75	5 6	70	5 1	65	5 1
	85	7 2	83	6 9	78	6 6	75	6 6

	1934		1935		1936		1937	
	%	s. d.	%	s. d.	%	s. d.	%	s. d.
	74	6 5	73	6 6	74	6 8	76	6 8
	74	6 8	73	6 9	74	6 10	75	6 10
	77	6 4	77	6 2	75	6 5	78	6 5
	62	4 10	62	4 10	62	4 11	63	4 11
	72	6 3	72	6 3	72	6 4	73	6 4

Shed and Yard Working.

Mileage and Cost—Figures for One Company only.

	1930		1931		1932		1933	
	Mill.	%	Mill.	%	Mill.	%	Mill.	%
	25.0	91	23.1	85	21.1	77	21.3	78
	104.2	110	100.9	106	97.8	103	101.2	107
	£2.0	86	£1.8	78	£1.6	70	£1.6	70
	32.0	86	30.0	80	27.4	73	27.2	73

	1934		1935		1936		1937	
	Mill.	%	Mill.	%	Mill.	%	Mill.	%
	22.4	82	22.4	82	23.7	87	24.1	88
	109.0	115	109.0	115	111.6	118	110.8	117
	£1.6	70	£1.6	70	£1.7	74	£1.8	77
	27.3	73	27.3	73	28.4	76	28.6	77

Local Charges—Four Companies.

Expenditure and Total Superannuation and Pensions Charges.

	1923		1933		1935		1937	
	%	(£000)	%	(£000)	%	(£000)	%	(£000)
	100	1,318	67	1,334	68	1,344	68	1,344
	100	3,567	135	3,865	146	3,967	150	3,967

chiefly on the many inter-relating factors which affect the annual expenditure, and the results are confined to certain clearly defined trends, attention being directed when 1937 is contrasted with results for the basic year 1923, which is frequently also regarded as a good statistical base from which

common to most of the tables, namely the narrowing degree of difference between the results of three railways which rely for more than 50 per cent. of their railway receipts on freight traffic.

TABLE 37C. Figures Before Correction for Revised Basis of Local Rates Payments.

	1931		1932		1933		1934		1935		
	s.	d.	%	s.	d.	%	s.	d.	%	s.	d.
L.M.S.	7	1	81	6	11	79	6	9	77	6	5
L.N.E.	7	3	80	7	0	77	6	10	75	6	9
G.W.R.	7	0	84	6	8	80	6	5	78	6	5
S.R.	5	7	71	5	2	66	4	11	63	4	10
Total	6	10	78	6	7	75	6	4	73	6	3

es have become increasingly different as electrification has steadily company's problems, in view of its 77 per cent. dependence on many respects, so far as operating matters are concerned, entirely er lines.

the data in respect of passenger train working, and large scale better- es, in the case of three larger lines mostly achieved since 1929. The h showed the lowest figures in 1923 has improved its relative position the Southern Railway, thanks to electric traction, shows the greatest

Passenger Train-miles—All Types of Traction.

Passenger Train-miles per Train-hour.

	1923	1929	1930	1931	1932
	14.20	14.21	14.37	14.49	14.61
	13.35	13.66	13.69	13.84	14.02
	13.68	13.34	13.43	13.42	13.52
	13.75	16.80	16.96	17.09	17.08
	14.56	14.60	14.58	14.45	14.39
	14.13	14.23	14.36	14.37	14.37
	13.74	13.96	14.08	14.19	14.16
	17.56	17.53	17.65	17.73	17.80

Passenger Train-miles per Engine-hour.

	1923	1929	1930	1931	1932
	10.47	10.64	10.79	10.88	10.97
	10.44	10.64	10.69	10.81	10.97
	10.77	10.72	10.80	10.76	10.82
	10.55	13.21	13.44	13.62	13.67
	10.98	11.03	11.07	11.02	11.00
	11.02	11.05	11.13	11.10	11.07
	10.91	11.09	11.18	11.25	11.21
	14.22	14.22	14.44	14.56	14.84

Freight Train-miles—All Types of Traction.

Freight Train-miles per Train-hour.

	1923	1929	1930	1931	1932
	8.53	8.43	8.89	9.13	9.66
	8.47	8.22	8.59	8.91	9.37
	8.13	8.64	9.05	9.34	9.76
	10.02	9.34	9.45	9.53	9.72
	9.53	9.21	9.09	8.43	8.18
	9.30	9.22	9.34	9.08	8.85
	9.74	9.77	9.75	9.39	9.07
	9.79	9.66	9.73	9.57	9.28

Freight Train-miles per Engine-hour.

	1923	1929	1930	1931	1932
	3.58	3.51	3.65	3.75	3.87
	3.45	3.45	3.58	3.65	3.74
	3.08	3.18	3.27	3.34	3.42
	3.07	3.08	3.13	3.14	3.19
	3.84	3.77	3.76	3.59	3.55
	3.75	3.77	3.80	3.77	3.76
	3.42	3.43	3.43	3.39	3.33
S.R.	3.20	3.16	3.18	3.13	3.15

Table 41, covering freight train operating results, does not show such consistent improvement, the London and North Eastern and Great Western Railways having increased the freight train-miles per train-hour in 1937, when compared with 1923, or with 1929. Both the London Midland and Scottish and Southern Railways' results in 1929 were not so high as in 1923, and the 1937 figures reveal a further fall, although much higher figures were achieved in the intervening years when traffic was not so heavy.

Measured on an engine-hour basis, three companies reveal consistent improvement comparing 1937 with 1923, and the London Midland and Scottish, which had a reduced figure in 1929, had nearly re-attained its 1923 results, a period when it provided a higher figure than any of the other lines; again, in the intervening years, higher figures had been achieved.

The contents of Table 42 relate to the utilisation of engine power, and the Southern Railway figures are again affected by the ever-growing use of electric traction, since a larger proportion of Southern Railway steam mileage is engaged in freight traffic working.

In the case of engine-hours per day per engine in use, the London Midland and Scottish Railway, which had the lowest figure of the four railways in 1923 and in 1929, achieved the top figure in 1937, its rise having been continuous since 1930. The London and North Eastern Railway result in 1937 exceeded that for 1923, but was lower than in 1929; in the case of the Great Western and Southern Railways, the results were better in 1937 than in 1929, but did not attain the 1923 standard.

As regards engine-miles per day, the London Midland and Scottish Railway shows a very remarkable increase of almost 20 miles compared with 1923, but improvement is recorded for all companies, the high Southern Railway figure being, in part, accounted for by the smaller proportion of freight traffic.

TABLE 42.

Steam Locomotives.

Engine-hours per Day per Engine in Use (Weekdays).

		1923	1929	1930	1931	1932
L.M.S.	..	11.63	11.37	11.15	11.47	11.54
L.N.E.	..	12.38	12.67	12.28	12.01	11.63
G.W.R.	..	13.23	12.88	12.54	12.31	12.07
S.R.	..	12.57	11.94	11.92	11.96	11.86
		1933	1934	1935	1936	1937
L.M.S.	..	11.99	12.51	13.08	13.74	13.78
L.N.E.	..	11.92	11.93	11.85	12.05	12.43
G.W.R.	..	12.38	12.55	12.58	12.89	13.15
S.R.	..	12.19	12.36	12.29	12.40	12.31

Engine-miles per Day per Engine in Use (Weekdays).

		1923	1929	1930	1931	1932
L.M.S.	..	97.53	94.60	95.18	99.54	102.76
L.N.E.	..	98.99	100.90	99.66	99.37	99.05
G.W.R.	..	103.83	103.90	103.35	102.75	102.77
S.R.	..	119.19	117.16	117.99	118.96	118.93
		1933	1934	1935	1936	1937
L.M.S.	..	106.77	110.48	115.58	118.14	117.42
L.N.E.	..	101.80	101.58	101.71	102.46	104.78
G.W.R.	..	105.97	107.88	108.53	110.09	110.43
S.R.	..	122.65	123.44	121.98	121.72	120.15

The figures in Tables 43, 44 and 45 are self-explanatory, and demonstrate the serious effect on railway operating of strong competition from other means of transport. To hold traffic, the service must be made more frequent, and this automatically makes difficulties in obtaining satisfactory loads; also, such competition has to be met by faster services, in which case loads must often be limited. In view of these considerations, it is a matter for some surprise that the average train load has not suffered more seriously; indeed, since 1923 on the Great Western Railway it has actually increased, and the proportion of empty to loaded wagons per freight train has fallen in the case of all companies. This proportion remains highest on the London and North Eastern Railway and lowest on the Southern Railway, but the figure is one affected considerably by the traffic handled in the different areas served.

TABLE 43.

Average Net Freight Train Load.

		1923	1929	1930	1931	1932
		Tons	Tons	Tons	Tons	Tons
L.M.S.	..	130.37	126.64	124.27	121.53	118.64
L.N.E.	..	139.84	138.07	133.80	131.27	127.10
G.W.R.	..	135.75	138.47	134.33	129.48	125.23
S.R.	..	110.40	108.05	107.91	108.31	103.72
		1933	1934	1935	1936	1937
		Tons	Tons	Tons	Tons	Tons
L.M.S.	..	118.93	121.86	123.76	126.32	128.83
L.N.E.	..	128.81	131.67	130.81	133.43	135.33
G.W.R.	..	127.99	131.44	131.77	132.83	138.39
S.R.	..	101.36	103.54	104.41	103.95	105.77

TABLE 44.

Average Number of Wagons per Freight Train.

		1923	1929	1930	1931	1932
L.M.S.	.. Loaded	23.82	23.43	23.06	22.89	22.73
	.. Empty	11.01	10.50	10.62	10.92	10.72
	.. Total	34.83	33.93	33.68	33.81	33.45
L.N.E.	.. Loaded	23.41	22.94	22.48	22.37	22.06
	.. Empty	12.60	12.29	12.27	12.39	12.20
	.. Total	36.01	35.23	34.75	34.76	34.26
G.W.R.	.. Loaded	23.15	23.72	23.52	23.25	22.61
	.. Empty	11.69	11.70	11.45	11.28	10.93
	.. Total	34.84	35.42	34.97	34.53	33.54
S.R.	.. Loaded	23.54	22.32	22.04	21.67	20.88
	.. Empty	10.79	10.25	9.99	10.42	10.55
	.. Total	34.33	32.57	32.03	32.09	31.43
		1933	1934	1935	1936	1937
L.M.S.	.. Loaded	23.21	23.43	23.57	23.78	23.68
	.. Empty	10.68	10.80	10.87	10.89	10.75
	.. Total	33.89	34.23	34.44	34.67	34.43
L.N.E.	.. Loaded	22.39	22.42	22.41	22.70	22.60
	.. Empty	12.44	12.56	12.61	12.54	12.36
	.. Total	34.83	34.98	35.02	35.24	34.96
G.W.R.	.. Loaded	23.22	23.54	23.73	23.79	23.79
	.. Empty	10.90	10.89	11.05	11.10	11.05
	.. Total	34.12	34.43	34.78	34.89	34.84
S.R.	.. Loaded	20.70	20.86	20.94	21.38	21.47
	.. Empty	10.58	10.56	10.61	10.89	10.42
	.. Total	31.28	31.42	31.55	32.27	31.89

TABLE 45.

Average Wagon Load.

A—Ton-miles Divided by Loaded Wagon-miles.
 Merchandise (excluding Classes 1—6) and Livestock Traffic.

	1923	1929	1930	1931	1932
	Tons	Tons	Tons	Tons	Tons
L.M.S. ..	2.82	2.91	2.86	2.75	2.68
L.N.E. ..	2.96	3.01	2.94	2.87	2.75
G.W.R. ..	2.87	2.96	2.96	2.94	2.87
S.R. ..	2.87	2.72	2.76	2.82	2.70
	1933	1934	1935	1936	1937
	Tons	Tons	Tons	Tons	Tons
L.M.S. ..	2.66	2.72	2.74	2.80	2.85
L.N.E. ..	2.74	2.77	2.77	2.83	2.88
G.W.R. ..	2.85	2.88	2.88	2.92	2.99
S.R. ..	2.59	2.60	2.54	2.56	2.75

Minerals and Merchandise (Classes 1—6).

	1923	1929	1930	1931	1932
	Tons	Tons	Tons	Tons	Tons
L.M.S. ..	8.43	8.92	9.08	9.08	9.11
L.N.E. ..	8.77	9.32	9.31	9.39	9.28
G.W.R. ..	8.44	9.18	9.15	9.04	9.15
S.R. ..	7.81	8.42	8.58	8.61	8.68
	1933	1934	1935	1936	1937
	Tons	Tons	Tons	Tons	Tons
L.M.S. ..	9.10	9.31	9.38	9.44	9.55
L.N.E. ..	9.32	9.66	9.77	9.86	9.95
G.W.R. ..	9.09	9.19	9.22	9.46	9.61
S.R. ..	8.88	8.86	8.93	8.83	8.65

Coal, Coke and Patent Fuel.

	1923	1929	1930	1931	1932
	Tons	Tons	Tons	Tons	Tons
L.M.S. ..	8.51	8.80	8.84	8.87	8.88
L.N.E. ..	9.73	9.97	9.94	9.85	9.82
G.W.R. ..	9.56	9.87	9.92	9.92	9.89
S.R. ..	8.52	9.18	9.24	9.17	9.02
	1933	1934	1935	1936	1937
	Tons	Tons	Tons	Tons	Tons
L.M.S. ..	8.88	8.92	9.00	9.09	9.22
L.N.E. ..	9.85	9.91	9.92	10.01	10.06
G.W.R. ..	9.94	10.21	10.24	10.31	10.50
S.R. ..	9.13	9.18	9.41	9.36	9.38

All Descriptions of Traffic.

	1923	1929	1930	1931	1932
	Tons	Tons	Tons	Tons	Tons
L.M.S. ..	5.45	5.38	5.35	5.27	5.18
L.N.E. ..	5.92	5.97	5.91	5.82	5.71
G.W.R. ..	5.93	5.90	5.77	5.62	5.59
S.R. ..	4.79	4.93	4.99	5.09	5.05
	1933	1934	1935	1936	1937
	Tons	Tons	Tons	Tons	Tons
L.M.S. ..	5.08	5.16	5.21	5.27	5.40
L.N.E. ..	5.70	5.82	5.79	5.83	5.96
G.W.R. ..	5.56	5.62	5.61	5.64	5.87
S.R. ..	4.99	5.05	5.05	4.95	5.01

B—Average Wagon Load at Starting Point:

Tonnage Forwarded Divided by Number of Loaded Wagons Forwarded.

Merchandise (excluding Classes 1—6) and Livestock Traffic.

		1933	1934	1935	1936	1937
		Tons	Tons	Tons	Tons	Tons
L.M.S.	..	2.70	2.77	2.80	2.87	2.94
L.N.E.	..	2.99	3.07	3.08	3.18	3.27
G.W.R.	..	2.98	3.04	3.04	3.09	3.16
S.R.	..	2.55	2.54	2.50	2.56	2.76

Minerals and Merchandise (Classes 1—6).

		1933	1934	1935	1936	1937
		Tons	Tons	Tons	Tons	Tons
L.M.S.	..	9.21	9.40	9.45	9.54	9.60
L.N.E.	..	9.51	9.77	9.89	10.05	10.20
G.W.R.	..	9.19	9.19	9.24	9.47	9.67
S.R.	..	8.59	9.19	9.06	8.98	8.59

Coal, Coke and Patent Fuel.

		1933	1934	1935	1936	1937
		Tons	Tons	Tons	Tons	Tons
L.M.S.	..	8.93	8.95	9.01	9.09	9.21
L.N.E.	..	10.89	10.94	10.95	11.02	11.13
G.W.R.	..	10.38	10.75	10.85	10.96	11.18
S.R.	..	9.20	9.30	9.66	9.65	9.50

All Descriptions of Traffic.

		1933	1934	1935	1936	1937
		Tons	Tons	Tons	Tons	Tons
L.M.S.	..	6.38	6.48	6.56	6.61	6.74
L.N.E.	..	7.73	7.91	7.91	7.98	8.16
G.W.R.	..	7.28	7.38	7.35	7.35	7.67
S.R.	..	4.90	5.02	5.03	5.05	5.00

The average wagon-load at starting point is the best index to the degree to which wagon capacity has been adequately utilised, but these figures are not available for 1923, and therefore the original basis of ton-miles divided by loaded wagon-miles is shown in order to demonstrate the trend over the whole fifteen-year period. Since the latter includes the element of distance, changes in the average length of haul of different classes of traffic will affect the average wagon-load, unless the figure at starting point be employed.

In Table 15 was shown the growth in the average capacity per wagon, and this increased capacity is reflected in the better load obtained for the various descriptions of traffic as shown in Table 45.

Compared with foreign railways, the small size of the average British merchandise wagon has undoubtedly proved a most useful factor in retaining traffic to the rails.

As will be seen from the contents of Table 46, the average length of haul has, on the whole, consistently increased, whether measured for the railways as a whole or each company individually. The lack of any important increase in the haul of coal traffic may be accounted for by the comparative lack of road competition in the case of this category of traffic, thus leaving the short hauls with the railway, and the presence, on the other hand, of increased competition from coastwise shipping, thus diverting some of the long-distance movement from the railways.

TABLE 46.

Average Length of Haul.

Merchandise (excluding Classes 1—6) and Livestock Traffic.

	1923	1929	1930	1931	1932
	Miles	Miles	Miles	Miles	Miles
L.M.S. ..	63.01	69.70	70.05	71.05	72.47
L.N.E. ..	60.86	64.86	65.96	68.12	67.53
G.W.R. ..	62.84	66.26	67.91	70.37	70.75
S.R. ..	49.63	48.18	48.76	49.27	48.89
Great Britain	82.75	91.13	93.00	95.69	96.72

	1933	1934	1935	1936	1937
	Miles	Miles	Miles	Miles	Miles
L.M.S. ..	73.46	74.27	75.13	76.48	75.54
L.N.E. ..	69.38	69.74	70.69	71.98	71.78
G.W.R. ..	72.10	72.78	74.56	76.28	74.64
S.R. ..	48.56	48.08	47.99	49.07	51.44
Great Britain	99.30	100.32	101.87	103.86	103.21

Minerals and Merchandise (Classes 1—6).

	1923	1929	1930	1931	1932
	Miles	Miles	Miles	Miles	Miles
L.M.S. ..	47.66	48.56	49.13	51.49	52.65
L.N.E. ..	36.61	39.76	42.23	43.53	42.74
G.W.R. ..	44.99	45.61	46.07	46.28	46.45
S.R. ..	34.50	39.41	40.72	39.88	42.35
Great Britain	53.55	55.48	57.47	59.42	60.68

	1933	1934	1935	1936	1937
	Miles	Miles	Miles	Miles	Miles
L.M.S. ..	52.21	50.49	51.55	51.36	51.71
L.N.E. ..	45.02	44.66	44.21	44.69	44.84
G.W.R. ..	50.64	52.46	52.72	52.70	53.90
S.R. ..	40.31	42.41	44.39	42.73	46.45
Great Britain	61.98	61.45	62.18	62.21	62.32

Coal, Coke and Patent Fuel.

	1923	1929	1930	1931	1932
	Miles	Miles	Miles	Miles	Miles
L.M.S. ..	38.20	39.25	39.21	40.52	39.42
L.N.E. ..	34.21	34.57	35.04	36.38	35.28
G.W.R. ..	32.99	32.47	32.78	33.63	33.46
S.R. ..	35.41	37.20	37.43	37.29	37.92
Great Britain	42.91	42.60	43.00	44.79	43.76

	1933	1934	1935	1936	1937
	Miles	Miles	Miles	Miles	Miles
L.M.S. ..	39.07	39.46	39.84	40.59	40.63
L.N.E. ..	34.36	34.54	34.43	34.81	35.46
G.W.R. ..	33.27	33.36	33.91	35.69	35.05
S.R. ..	37.37	37.21	36.64	35.62	36.02
Great Britain	42.87	42.94	43.10	44.15	44.29

TABLE 46.

Average Length of Haul—Continued.

		All Descriptions of Traffic.				
		1923	1929	1930	1931	1932
		Miles	Miles	Miles	Miles	Miles
L.M.S.	..	45.01	47.80	47.89	49.10	48.62
L.N.E.	..	39.34	41.04	41.94	43.34	42.00
G.W.R.	..	39.56	40.43	41.22	42.61	42.25
S.R.	..	39.61	41.01	41.62	41.39	41.93
Great Britain		51.72	53.68	54.59	56.48	55.61
		1933	1934	1935	1936	1937
		Miles	Miles	Miles	Miles	Miles
L.M.S.	..	48.82	49.12	49.71	50.65	50.47
L.N.E.	..	42.07	42.23	42.26	42.97	43.37
G.W.R.	..	43.10	43.77	44.57	46.56	45.73
S.R.	..	41.10	41.40	41.48	40.92	42.65
Great Britain		55.78	56.09	56.58	57.99	57.85

The main features to be noted in Table 47 are the heavy freight traffic density per route-mile for three of the companies, the serious effect of trade depression on these figures, and the fact that the Southern Railway results for 1937 are actually higher than the corresponding figure for 1923, although lower than for 1929.

It will also be seen that the Great Western Railway 1937 result closely approximated that for 1923, and was better than for 1929; the London Midland and Scottish Railway remains the railway of heaviest freight traffic density.

This table should be read in relationship with the figures of train-miles (coaching and freight) per annum in relation to length of route or track-mileage.

Taking the British railways, other than the London Passenger Transport Board, as a whole, the train-miles per route-mile per annum, including passenger and freight, worked out at 21,100 in 1937, or per running track-mile (excluding sidings) at roughly 11,500. There is no doubt that these figures are higher than those for any other country's railway system, and they are higher than for any previous year in Great Britain.

TABLE 47.

Average Net Ton-miles per Route Mile per Annum.

		1923	1929	1930	1931	1932
L.M.S.	..	1,126,007	1,094,311	1,029,121	947,757	876,174
L.N.E.	..	1,010,785	1,020,746	961,923	874,949	781,269
G.W.R.	..	916,766	914,499	861,152	779,579	724,430
S.R.	..	361,878	366,835	364,363	362,827	339,654
		1933	1934	1935	1936	1937
L.M.S.	..	871,312	939,351	961,702	1,032,002	1,083,343
L.N.E.	..	794,888	868,459	865,333	924,516	978,185
G.W.R.	..	737,537	786,238	802,210	844,280	916,015
S.R.	..	333,629	353,989	355,356	360,456	363,699

TABLE 48.

Average Net Ton-miles per Engine-hour.

(a) Per Train-Engine-hour.

		1923	1929	1930	1931	1932
L.M.S.	..	932.19	891.14	934.14	948.20	980.30
L.N.E.	..	1,020.02	964.01	981.43	1,003.04	1,021.74
G.W.R.	..	907.89	994.12	1,012.68	1,006.71	1,019.28
S.R.	..	895.32	821.78	835.34	847.84	827.50
		1933	1934	1935	1936	1937
L.M.S.	..	973.73	961.47	967.88	917.50	904.64
L.N.E.	..	1,026.88	1,039.53	1,043.64	1,032.55	1,018.26
G.W.R.	..	1,037.88	1,064.40	1,061.12	1,026.74	1,033.93
S.R.	..	809.49	818.48	828.33	804.12	803.73

TABLE 48.

Average Net Ton-miles per Engine-hour—*Continued.*

		(b) Per Total Engine-hour.				
		1923	1929	1930	1931	1932
L.M.S.	..	464.54	443.38	452.55	454.61	457.86
L.N.E.	..	475.95	469.79	472.23	473.35	469.80
G.W.R.	..	418.73	440.49	438.79	431.33	427.82
S.R.	..	348.11	340.24	344.58	346.64	336.03
		1933	1934	1935	1936	1937
L.M.S.	..	457.04	459.56	465.31	453.58	456.69
L.N.E.	..	477.18	490.68	492.02	497.88	501.44
G.W.R.	..	436.32	448.06	449.67	448.20	457.53
S.R.	..	329.29	332.73	337.47	329.52	337.68

In Table 48 will be found data as to the average net ton-miles per train engine-hour and per total engine-hour. The Great Western Railway achieved the highest figure in 1937, closely followed by the London and North Eastern Railway, so far as the train engine-hour figure was concerned; on the total engine-hour basis, the London and North Eastern Railway has more than retained the lead it held in 1923. Data as to fuel and oil consumption are set out in Tables 49 and 50, and any analysis of these figures should not be divorced from considerations of the quality of the coal, the average speed and average load of the trains which, in regard to passenger trains, have increased very considerably during the period under review.

TABLE 49.

Steam Locomotive Coal Consumption per Engine-mile.

		Passenger Trains.				
		1923	1929	1930	1931	1932
		lb.	lb.	lb.	lb.	lb.
L.M.S.	..	52.01	53.02	51.61	51.32	51.22
L.N.E.	..	52.59	52.17	51.87	52.04	51.46
G.W.R.	..	39.97	40.55	40.71	41.23	41.06
S.R.	..	45.01	41.68	41.38	40.90	40.84
		1933	1934	1935	1936	1937
		lb.	lb.	lb.	lb.	lb.
L.M.S.	..	51.48	51.50	51.49	52.10	52.18
L.N.E.	..	51.41	51.34	51.31	51.96	52.62
G.W.R.	..	41.22	41.03	41.17	41.58	41.95
S.R.	..	40.34	40.17	40.92	41.42	41.99
		Freight Trains.				
		1923	1929	1930	1931	1932
		lb.	lb.	lb.	lb.	lb.
L.M.S.	..	64.24	61.82	61.17	61.68	61.16
L.N.E.	..	61.81	61.07	60.03	59.99	58.63
G.W.R.	..	50.90	49.05	48.55	48.40	47.39
S.R.	..	47.51	48.36	47.89	48.37	47.20
		1933	1934	1935	1936	1937
		lb.	lb.	lb.	lb.	lb.
L.M.S.	..	61.21	60.92	60.45	60.65	60.38
L.N.E.	..	58.57	58.47	58.97	59.11	59.76
G.W.R.	..	47.18	46.99	47.42	46.94	45.89
S.R.	..	47.39	47.70	47.43	46.02	46.42

TABLE 49. Steam Locomotive Coal Consumption per Engine-mile—*Continued.*

		All Services.				
		1923	1929	1930	1931	1932
		lb.	lb.	lb.	lb.	lb.
L.M.S.	..	58.61	57.91	56.73	56.75	56.29
L.N.E.	..	58.05	57.30	56.51	56.47	55.32
G.W.R.	..	46.19	45.20	44.93	45.02	44.33
S.R.	..	45.72	43.76	43.37	43.19	42.77
		1933	1934	1935	1936	1937
		lb.	lb.	lb.	lb.	lb.
L.M.S.	..	56.38	56.24	55.95	56.43	56.34
L.N.E.	..	55.24	55.20	55.38	55.82	56.49
G.W.R.	..	44.27	44.10	44.36	44.35	44.03
S.R.	..	42.54	42.60	43.05	42.99	43.50

TABLE 50. Steam Locomotive Lubricating Oil Used per 100 Engine-miles.

		All Services.				
		1923	1929	1930	1931	1932
		Pints	Pints	Pints	Pints	Pints
L.M.S.	..	6.64	6.42	6.08	5.85	5.73
L.N.E.	..	7.22	6.84	6.85	6.82	6.51
G.W.R.	..	6.60	6.55	6.66	6.75	6.84
S.R.	..	6.42	6.90	6.84	6.74	6.69
		1933	1934	1935	1936	1937
		Pints	Pints	Pints	Pints	Pints
L.M.S.	..	5.69	5.73	5.74	5.78	5.94
L.N.E.	..	6.30	6.36	6.46	6.45	6.45
G.W.R.	..	6.86	6.61	6.62	6.65	6.71
S.R.	..	6.69	6.80	6.53	6.67	6.81

IX. ACCIDENT STATISTICS.

It is not necessary to comment upon Table 51 since the figures fluctuate considerably from year to year, and one serious accident may cause fatalities in excess of the total for several preceding years. It suffices to point out that in 1925 no passenger was killed in a train accident on the four railways, that in 1930 only one passenger was killed from this cause, and that, with over 1,000,000,000 passengers carried in every one of the fifteen years this review covers, the record for safety earned by the British railways is one of which any industry could be excessively proud.

Fortunately, Great Britain is comparatively free of the level crossing accidents which have created such a difficult problem for railways in other countries. This freedom may be ascribed to the expensive but effective protection of gates, usually interlocked with the signals, at every public road crossing over a railway.

ACCIDENT STATISTICS—NUMBERS KILLED AND INJURED—FOUR COMPANIES.

TABLE 51.

	1923		1929		1930		1931		1932		1933		1934		1935		1936	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1. Train Accidents—																		
Passengers ..	3	431	3	496	1	536	8	401	4	180	6	594	17	498	13	390	3	458
Servants ..	7	104	11	91	4	94	13	79	3	57	10	80	11	84	6	78	17	69
Other Persons ..	6	11	2	51	9	43	13	30	9	30	7	38	7	31	10	37	14	33
	16	546	16	638	14	673	34	510	16	267	23	712	35	613	29	505	34	560
2. Movement Accidents—																		
Passengers ..	56	2,169	59	3,557	53	3,480	50	3,426	53	3,655	53	3,882	58	4,135	73	4,341	55	5,032
Servants ..	194	3,382	190	3,059	189	2,765	141	2,527	158	2,236	142	2,320	195	2,216	158	2,332	190	2,574
Other Persons ..	59	116	58	105	43	91	44	113	48	86	38	99	24	99	51	74	39	87
	309	5,667	307	6,721	285	6,336	235	6,066	259	5,977	233	6,301	277	6,450	282	6,747	284	7,693
3. Non-Movement Accidents—																		
Passengers ..	5	608	4	1,187	5	1,132	2	1,052	3	1,155	5	1,191	5	1,855	4	2,148	4	2,379
Servants ..	36	15,016	46	15,231	31	14,531	33	13,428	35	12,079	34	11,898	24	11,563	36	12,208	34	13,261
Other Persons ..	11	447	7	565	8	593	11	538	2	446	6	423	4	468	11	487	4	484
	52	16,071	57	16,983	44	16,256	46	15,018	40	13,680	45	13,512	33	13,886	51	14,843	42	16,124

K—Killed. I—Injured.

X. STAFF EMPLOYED.

The annual staff census is taken during one week in March, and therefore the figures set out in Table 52 are not average figures over the twelve months, which is the more common statistical method of computation adopted in other countries.

Nevertheless, they serve to show the general trend in regard to railway employment, and they include staff engaged in ancillary businesses such as docks, hotels, cartage, steamboats, etc. It will be noted that the minimum figure was reached in 1933, since when, owing to the recovery in traffic, there has been a progressive increase, but it is unlikely the figure applicable to 1924 will ever be re-attained.

Average earnings for a week in March, 1924, and the years 1934—1937 are shown in Table 53.

TABLE 52.

Statistics of Employees.

	1924	1930	1931	1932	1933
L.M.S. ..	274,523	250,742	231,617	224,839	215,509
L.N.E. ..	207,528	195,030	180,163	173,957	166,714
G.W.R. ..	117,113	110,729	107,970	103,839	96,436
S.R. ..	70,484	71,488	68,436	68,119	60,619
Total ..	669,648	627,989	588,186	570,754	539,278

	1934	1935	1936	1937
L.M.S. ..	219,616	222,220	222,869	230,323
L.N.E. ...	169,772	171,339	171,798	175,849
G.W.R. ..	96,642	95,729	98,290	100,614
S.R. ...	62,807	65,008	66,399	67,735
Total ..	548,837	554,296	559,356	574,521

TABLE 53.

Average Earnings.
All Railways in Great Britain.

	Week Ended 29-3-24 s. d.	Week Ended 10-3-34 s. d.	Week Ended 9-3-35 s. d.	Week Ended 7-3-36 s. d.	Week Ended 13-3-37 s. d.
Staff entered at salaried rates:—Clerical, supervisory, etc. staff (exclusive of officers and of staff entered under ancillary businesses)	92 0	89 11	91 9	92 0	93 0
Staff entered at wages rates (excluding staff entered under ancillary businesses):—					
Conciliation staff	67 6	62 8	63 1	64 5	66 1
Shop and Artisan Staff	68 7	67 0	68 5	69 1	70 10

Cost of Living.
Ministry of Labour Index.

	March 1924	March 1934	March 1935	March 1936	March 1937
July, 1914 = 100	178	140	141	146	151
Recalculated with 1924 as a base year ..	100	79	79	82	85

VI. CONCLUSION.

The period of fifteen years, 1923—1937, equivalent to about one-seventh of the history of steam railways, is sufficiently long to permit of one obtaining a clear view of the trends in British railway progress in true perspective.

Throughout this period of fifteen years, few years could be termed normal ones, that is to say, with conditions that could legitimately in more settled times be regarded as those which were to be expected. Railways throughout the world have suffered from the dual disadvantage of trade depression, internal and international, as well as the steady growth of competition from alternative means of transport, notably on the roads.

In many cases, these alternative forms of transport have been heavily subsidised by Governments, even where the railways are State owned and operated.

The years of peak traffic in the different countries have varied widely, and in Great Britain the railway peak so far attained was in 1923, in Germany the peak years were 1929 and 1937, in the United States, 1926 and 1929. In most countries the most depressed traffic years were 1932 or 1933.

The British results for 1929, though not attaining those of 1923, have come to be regarded as comparatively satisfactory when viewed in retrospect, and the results for that year were not attained in 1937. In brief, the year 1929 has come to be regarded as a useful basis for comparison.

Whilst traffic recovered during the period 1934—1937, there has been a recession in many countries since the close of that year, and, owing largely to competition from other means of transport, the level of receipts, both passenger and freight, has failed to rise proportionately to the increase in traffic handled. Railway legislation for 100 years was based on the theory that the railways held a monopoly of inland transport facilities; such an assumption no longer holds good, and legislation passed since 1927 has done something to remedy the situation.

The British railways can justly make the claim that they have met the new set of conditions as successfully as those in any other country, and over the fifteen-year period a fall in railway receipts of 15 per cent. has been met by a fall in railway expenditure of 16 per cent.

Since 1923, the work of welding into four systems the large number of constituent lines has been carried on without cessation and whilst, owing to the kaleidoscopic nature of the changes which have occurred from year to year, it is impossible to measure financially the results of amalgamation, it can be stated that consistent progress has been achieved in every branch of railway administration and working, that the properties themselves have been kept up to concert pitch and that the passenger and freight service offered to the public has never been more efficient. This has been achieved without Government subsidies, indeed, the British railways are one of the few remaining examples of a national railway system provided by means of company owned and operated lines.

In short, the railways of Great Britain have played their due part in the economic and social welfare of the country; how they have achieved this is demonstrated by the foregoing figures in this survey.

1st June, 1938.

THE MAIN LINE RAILWAYS OF GREAT BRITAIN, 1923—1937.

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